

National Association of County Agricultural Agents



Proceedings

**100th Annual Meeting and
Professional Improvement Conference**

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TABLE OF CONTENTS

	PAGE
REPORT TO MEMBERSHIP.....	1-23
POSTER SESSION APPLIED RESEARCH.....	25-38
EXTENSION EDUCATION.....	39-66
AWARD WINNERS.....	67
AG AWARENESS & APPRECIATION AWARD.....	68-71
EXCELLENCE IN 4-H PROGRAMMING.....	71-76
SEARCH FOR EXCELLENCE IN CROP PRODUCTION.....	76-79
SEARCH FOR EXCELLENCE IN FARM & RANCH FINANCIAL MANAGEMENT.....	79-81
SEARCH FOR EXCELLENCE IN FARM HEALTH & SAFETY.....	81-82
SEARCH FOR EXCELLENCE IN FORESTRY AND NATURAL RESOURCES.....	83-85
SEARCH FOR EXCELLENCE IN LANDSCAPE HORTICULTURE.....	85-87
SEARCH FOR EXCELLENCE IN LIVESTOCK PRODUCTION.....	88-91
SEARCH FOR EXCELLENCE IN SUSTAINABLE AGRICULTURE.....	91-94
SEARCH FOR EXCELLENCE YOUNG BEGINNING SMALL FARMERS RANCHERS.....	94-99
SARE FELLOWS.....	100-104
AMERICAN /WORLD AGRICULTURE AWARD.....	105
ACHIEVEMENT AWARD WINNERS.....	106
DISTINGUISHED SERVICE AWARD WINNERS.....	106
HALL OF FAME AWARD WINNERS.....	107-109
COMMUNICATION AWARDS.....	110-127
MEMBER PRESENTATION ABSTRACTS.....	129
ADMINISTRATIVE SKILLS.....	130-131
AGRICULTURAL ECONOMICS.....	131-134
4-H & YOUTH.....	134-136
AGRICULTURAL ISSUES & PUBLIC RELATIONS.....	137-138
AGRONOMY & PEST MANAGEMENT.....	138-144
ANIMAL SCIENCE.....	144-147
CLIMATE & AGRICULTURE SESSIONS.....	148-150
EARLY CAREER DEVELOPMENT.....	150-151
HORTICULTURE AND TURFGRASS.....	151-158
NATURAL RESOURCES.....	158-161
SUSTAINABLE AGRICULTURE.....	161-163
TEACHING & EDUCATIONAL TECHNOLOGIES.....	163-164
SPEAKER PROFILES.....	165

2014-2015 NACAA Report to the Membership

President Mike Hogan, Ohio



Serving as your president during the past year has been a humbling, gratifying, and challenging experience, and will certainly be the highlight of this county agent's career. I thank you for the privilege of serving you in this leadership role.

As President, I can report to you as members that your association is as strong today as it has ever been. In 2015, NACAA experienced a third consecutive year of active member growth. We continue to have the largest and most active membership of any of our peer associations. Our financial picture is positive and our educational foundation is growing. Financial support from donors and sponsors has been maintained, which is an accomplishment in an environment of corporate consolidation and philanthropic belt-tightening. NACAA continues to attract new partners for new recognition and professional development programs for NACAA members.

Legendary Ohio State football coach Woody Hayes used to say that "you win with people" and that is certainly true for our professional association. The primary reason for NACAA's success over the last 100 years is our people. The success of our recognition and professional development programs is due to the scores of NACAA members from around the country who volunteer each year to serve on committees as state chairs, regional vice-chairs, committee chairs, and council chairs. The fact that the NACAA AMPIC has more hours of professional development opportunities than any of our peer associations is a testimony to the extraordinary work of these leaders.

Members who serve in leadership roles as state presidents of their state associations, as regional directors and vice-directors, and as officers of NACAA do amazing work and are also responsible for the continuing success of our professional association.

Our life members also play a role in the success of our association today, and throughout our 100 year history. Over the last few years, during the planning of this year's AMPIC in South Dakota, I was delighted at the active involvement of our

life members in planning the AMPIC. Life members Mahlon Peterson and Randy Knapp of Wisconsin, and Bob Voberill of Nebraska travelled to South Dakota several times over the past few years to assist with AMPIC planning. This level of dedication from life members simply doesn't happen in other organizations.

Our NACAA Executive Director Scott Hawbaker is another of example of how NACAA wins with people. Scott's administrative leadership over the past several years has allowed NACAA to maintain and expand a high level of customer service for our members. I can't imagine serving as an officer of this association without the support, assistance, continuity, and institutional knowledge provided by Scott.

During the past couple of years, I've sometimes felt like Johnny Cash in the song "*I've Been Everywhere Man!*" " You know, I've been to Memphis, Portland, Vegas, San Diego, Washington, Sioux Falls, Mobile.... I've been everywhere man! And everywhere I have gone on behalf of NACAA, I've been amazed at the high esteem in which county agents are held. Nowhere was that demonstrated to a greater degree than in Washington DC when your officer team visited with USDA agency leaders during the PILD Conference this past spring. When we visited with high ranking officials in several USDA agencies, including the Deputy Secretary of USDA, we were greeted with thanks and admiration for the work that each of you does every day. These leaders understand the vital role which county agents play in a sustainable food, fiber, and energy production system in the United States.

While we celebrate our Centennial AMPIC this July in South Dakota, we should also capitalize on this milestone to chart the course for NACAA's next century. While strong and healthy today, our association certainly faces challenges it must confront if we are to continue to be of great value to our membership in the future. I would suggest three issues for us to address seriously in the coming years:

1. Evaluation of our Committee Structure and Organization – as changes occurs in our profession, in the agricultural landscape, and in the people we serve, a need will likely exist for some re-tooling of how we are organized to do the work of our association.
2. Restructuring of the AMPIC – The AMPIC is of great value to our membership, but this value comes at a great financial cost and in energy and resources expended by host states.

3. Recognizing the Diversity of Our Profession – we simply must re-double our efforts to recognize the need for attracting and accommodating a rapidly diversifying profession and membership.

I would challenge each of you to think about how you can help shape *your* professional association for its next century of success.

See you in Sioux Falls!

**President Elect
Cynthia L. Gregg, Virginia**



Thank you: is defined as an adjective as expressing one's gratitude or thanks and it is also a noun defined as an expression of thanks, as by saying "thank you". This year I have much to be thankful for and appreciative of for NACAA Members. I would like to share some of these with you in this report.

The NACAA President-Elect's job includes working with the Executive Director, Scott Hawbaker on donor relations to support the many professional development activities to help you have a stronger, viable and relevant program for your clientele. The donors and sponsors are extremely valuable contributors to NACAA, through their donations of money, time, expertise, and so much more. We, as members, can learn about new technology, including equipment, crops, ornamentals, animals, water quality, fisheries, natural resources, climate, and the list goes on. NACAA has several donors, who have been a partner for many years. They have seen many changes in the make-up of our organization as well as their own, and through it all the partnership has been strong and unflinching. We have both benefited and become better because of each other. NACAA has a new donor this year and we look forward to forming a strong partnership with them for many years to come. This year NACAA has donations of over \$135,000 this year from our outstanding donors to support our vast array of professional development and improvement opportunities along with awards.

The NACAA Donors help us as members in many ways: 1. Program Development – the members who present at a session share their knowledge with others from across the country. These ideas and topics help expand research, demonstrations, workshops, and networks, which gives so much more back to our local areas. 2. Professional Development – the chance to learn from industry experts and fellow members on various issues, including climate, plant and animal disease management, nutrition, marketing, soil fertility, equipment, and so much more, this helps us be more knowledgeable on issues that will help empower our clientele. 3. Awards and Recognition – the recognition of a job well done by providing the opportunity to say congratulations on a job making positive strides in research, demonstration, programming, and a member's career as they

assist their clientele and coworkers without ever thinking about reward. 4. Help NACAA remain true to the mission. The mission of the National Association of County Agricultural Agents (NACAA), an organization of professional Extension educators, is to further the professional improvement of its members, communication and cooperation among all Extension educators and provide for enhancement of the image of Extension and the development of personal growth opportunities for extension professionals. Donors and Sponsors who support NACAA help make the above mentioned possible.

This year NACAA would like to welcome Bonnie Plants as a National Donor. Bonnie Plants, as you may remember, was a Major Donor to the 2014 NACAA Annual Meeting and Professional Improvement Conference in Mobile, Alabama and contributed greatly to the meeting's success. We are excited to begin this new partnership with Bonnie Plants and are looking forward to enhancing the Horticulture Professional Development and Recognition Programs. This year Bonnie Plants is the Sponsor for the Horticulture Pre-Tour and the Search for Excellence in Horticulture Program.

NACAA has many donors, who have been long term partners, reaching significant milestones in 2015. These Donors help provide professional development, recognition, and professional improvement of NACAA Members. This year American Income Life has been a Donor for sixty (60) years. They have been the sponsor of the Achievement Award Program for over forty-seven (47) years as well as an exhibitor in the Annual Trade Show. John Deere has been a donor for fifty-five (55) years. They assist with the Hall of Fame, Outstanding Young Farmer Program, and attend the Annual Trade Show. The United Soybean Board has a twenty-five (25) year history as a donor. They have helped with several programs over the years for example; the Committee Members Breakfast and actively participate in the Annual Trade Show as well. There are two donors reaching the fifteen (15) year anniversary in 2015. Bayer Advanced and SARE have both been active in Trade Talks, Tours, and the Annual Trade Show just to name a few of the venues of their support. It is an honor to recognize the above mentioned donors for all they have done for NACAA and Extension Professionals across the country, so I say a heartfelt thank you to all of our NACAA donors for their support and commitment to the members of NACAA.

So please take a few minutes to go by the Exhibits and visit with the donors present in Sioux Falls. I hope you take the time to make a new contact, learn something new, and build a stronger network while you are the NACAA AMPIC. Then when you get back home, take a few minutes to write a note to the donor; who sponsor your award, conduct a Trade Talk or Super Seminar on something that will help you educate your clientele back home, and because of the many professional improvement and development opportunities they have assisted with over the years.

In addition to working with donors, this year in honor of celebrating NACAA's 100th year of helping agents and specialists become better at their jobs across the country, the (\$100 for the 100th was announced. The funds will go to the NACAA Educational Foundation to help the foundation reach the goal of one million dollars by 2025. One of the goals of the Foundation is to support NACAA members with scholarships to attend graduate school, an educational tour, an educational workshop, or a national or international conference to help members educate clientele in their local county, parish, area, region, or state. Thank you to all of you and your state association for your contributions to the (\$100 for the 100th, in honoring NACAA's past, present and future.

Some other items of interest, the Joint Council of Extension Professionals (JCEP) added a new organization to the family in February during the JCEP Leadership Conference. Please everyone, when you get a chance, congratulate members of the National Association of Extension Program and Staff Development Professionals. I know everyone will make them feel welcome.

This year the JCEP Leadership Conference was held in Las Vegas on February 10-11. The conference was filled with wonderful leadership workshops and the Keynote Speaker: David Horsager – The Trust Edge, was very good. The JCEP Leadership Conference is open to all members, not only the leadership of your respective states. This year NACAA had a strong delegation, many presented and we had a productive association meeting as well. The regional Directors did a nice job in planning the association meeting, thank you. I hope you think about sharing one of your great leadership programs next year in 2016. If you have any questions please feel free to contact me. If I cannot answer your question, I know I can find someone who can answer it for you.

This year the Public Issues Leadership Development (PILD) Conference was held this year in Crystal City. I, unfortunately, did not get to attend due to family illness. I know the NACAA was well represented at the Conference. I heard the workshops, speakers and overall conference itself was well done. The NACAA has great representation on the planning committee with several Regional Directors. Thank you for all of your efforts planning the PILD Conference on behalf of NACAA. PILD is open to all members and you also get a chance to visit your elected officials on The Hill. The NACAA Board had the opportunity to meet with our USDA National Institute for Food and Agriculture Colleagues. It was a pleasure to work with Bill Hoffman to coordinate this meeting, I am sorry I had to miss it. I know NACAA was in good hands with our representatives: President: Mike Hogan, Vice-President: Mark Nelson, and Past President: Henry Dorough.

I would like to take this opportunity to say Thank you to the members of the Virginia Association of Agricultural Extension Agents for their support this year, without their support I would not have the chance to be a part of this amazing opportunity to serve on the NACAA Board. I would like to say thank you to all of you, NACAA Members, as well, for without you there would be no National Association of County Agricultural

Agents. I appreciate all of the trust you placed in me when you elected me to the NACAA Board. Please know my door is always open and I am just an email and phone call away.

A special thank you goes to Scott Hawbaker, NACAA Executive Director. He is the constant for NACAA with the donors, our members, state officers, and national board. He does an amazing job for all of us.

Finally, I feel Thank you is in order for the members who came before us, their foresight, leadership and organizational skills helped make NACAA what it is today. I also say Thank you to our current and future members, the next one hundred years is ours so let's make it count with additional foresight, leadership, organization skills, professional development, recognition, networking and more.

The 2015 NACAA AMPIC will be filled with amazing educational and recognition opportunities for all of us. It will be a pleasure to learn alongside you. I am certain I will learn so much from all of you during the many presentations, posters, Trade Talks, Super Seminars, and tours. I know I will have much to share with my local clientele and co-workers who cannot attend. I cannot wait to visit the Trade Show and visit with our donors and sponsors this year. I wish congratulations to **all** of the award winners, in all categories this year. I hope to have a chance to visit with you in Sioux Falls. I look forward to seeing many of you in Sioux Falls to celebrate the 100th Anniversary of the National Association of County Agricultural Agents. Again, thank you for all you do!

**Vice President
Mark Nelson, Utah**



My year as your Vice President is almost over and I can barely believe it has passed so quickly. The role of the NACAA Vice President is to work with the three council chairs to oversee all committee activities throughout the year. I have really enjoyed working closely with such dedicated and professional Council Chairs as Mary Sobba from Missouri; Richard Brzozowski from Maine and Kurt Jones from Colorado. Most NACAA members probably aren't aware of the tremendous number of hours the Council Chairs put in each year working on behalf of our professional association. Mary Sobba will be completing her term as the Council Chair for the Professional Improvement Council, and we will welcome Sherri Sanders from Arkansas as the new Council Chair for the Professional Improvement Council.

The 18 National Committee Chairs and 62 Regional Vice Chairs also log many hours carrying out the many NACAA awards and professional improvement programs, and deserve special thanks for their hard work. Like my predecessors, I asked that all national committee chairs and regional vice-

chairs communicate on a regular basis with state committee leaders. It was great to receive copies of numerous emails throughout the year between committee leaders at all levels, especially communication engaging state leadership. We should all continuously endeavor to improve communication among all of our leaders and members to ensure we remain relevant and informed.

If you are not currently serving on an NACAA committee as a State Chair, a Regional Vice Chair, a Regional Vice Chair, or a National Committee Chair, please consider doing so. Your professional association works for you because of the volunteer leadership of so many dedicated members. If you want to help improve our association the best way to do that is to get involved. If you know of a younger agent in your state that needs to get involved talk to them and encourage them to sign up to serve on one of the many committees. This is how I got my start in NACAA.

It has been a career highlight for me to have been elected to the position of vice president of NACAA in 2014. I look forward to working closely with the national leadership in the coming years but we cannot do it without your support. I look forward to visiting with each of you at the 2015 AM/PIC in Sioux Falls, South Dakota very soon. I would like to thank everyone who has made it possible for me to serve as the NACAA Vice President this past year. Thank you.

**Secretary
Matt Herring,
Missouri**



A little over a year ago colleagues in Missouri encouraged me to consider giving back to NACAA by making a bid for the office of Secretary. Since being elected at the 2014 AMPIC it has been a whirlwind of learning about the Association and the duties of the office. The experience of being the NACAA Secretary is both challenging and rewarding.

As Secretary of the association my primary responsibility is to record minutes of the board meetings and other activities of the association and keep our membership informed through posting minutes to the NACAA website. The board holds meetings before and after the Annual Meeting and Professional Improvement Conference. We hold winter and spring board meetings and monthly teleconferences. During the meetings I take minutes, but also make audio recordings that I play back to try to capture details I may have missed. Draft minutes are reviewed by the board and then approved at a meeting that is at least two weeks after board members receive the draft minutes. After the minutes are approved by the board they are posted on the NACAA website. Links are also established to board documents. The board decided in 2010 to restrict access to association financial information and so these reports are not

available through the website, but can be requested from the NACAA Treasurer.

The Association Secretary serves as the chair of the Internal Publications Committee. This committee is charged with oversight of the content of the NACAA website, The County Agent magazine and the Journal of NACAA. Stephen Brown continues to serve the association as editor of the Journal of NACAA. He has worked with a team of reviewers to edit and evaluate article submissions. June and December editions of the journal are published each year. The NACAA Board recently selected Lee Stivers to be our new Journal of NACAA editor taking over after the AMPIC in 2016. The Board purposely made this selection a year early to allow Lee the opportunity to train with Stephen. We welcome Lee to this role. The Journal provides members an avenue to publish in a peer reviewed journal, and an opportunity to share program and research results that can be used by our membership.

As we celebrate 100 years as an association it is important to recognize the value of retaining historical records of the organization. For many years an agreement with the National Agriculture Library in Washington D.C. allowed the association to store archival records for future use. In the early 1990's this relationship changed and records have not been stored at the library since that time. The Publications Committee in cooperation with the Board continues to evaluate options for storing important association records with goals of permanent storage, accessibility of records by the membership and cost effectiveness.

Many people have helped me understand the duties of this role in NACAA. My thanks go to the entire NACAA board and Executive Director Scott Hawbaker who have patiently answered my questions about how things work. Richard Fechter and Henry Dorough are my predecessors in this role and have also answered questions and provided guidance as I made my way through this first year. I have appreciated the opportunity to serve the membership of NACAA and look forward to seeing you in Sioux Falls in July!

**Treasurer
Alan B. Galloway,
Tennessee**



Like most good things we experience in life, they pass by quickly. This is my third and last report as NACAA Treasurer. Serving as treasurer has been enjoyable and challenging.

The duties have led to a greater understanding of the details involved in the multitude of activities of NACAA members and our many awards and recognition programs. Of course, the most challenging financially is the budget planning process for each fiscal year and annual meeting and professional

improvement conference (AM/PIC). The differences in how AM/PIC funds are handled with each state and keeping all involved aware of how expenses are divided is unique each year.

It is my pleasure to report the financial condition of NACAA remains strong. Through the development of the annual budget approved by the voting delegates each year NACAA has stayed in solid fiscal condition. As treasurer I have strived to maintain accurate records, report at least monthly to the NACAA Board and process all payments in a timely manner. In most cases, expense vouchers have been paid within two days of being received, most in the same day.

My commitment as I began as treasurer was to “Watch the Road” financially for NACAA. While we have hit a few bumps along the way, like the losses from Galaxy IV and increasing costs for transportation, food and lodging that impacts everyone especially as it relates to each AM/PIC. On the positive side our membership has been growing, sponsorship of our programs and awards has been solid and our investments have grown well over the past three years.

The NACAA fiscal committee continues to review our financial status and makes adjustments in budget planning and investments each year to protect and grow our funds and to find better ways to utilize them for the members.

The 2015 AM/PIC is the second where members could use the voucher received by having attended Galaxy IV to receive a reduced registration cost at a future NACAA AM/PIC. 2016 will be the last year of the vouchers. The funds for those vouchers were set aside prior to Galaxy and the incentive was successful in increasing NACAA participation in Galaxy and in turn participation at future NACAA conferences.

After handling the books during Galaxy, last year’s return to a “typical” NACAA AM/PIC was a pleasant experience. The budget planning process for the 2015 AM/PIC has proceeded smoothly as the South Dakota planning committee and members have done an excellent job working with their funding to make this year’s meeting and conference an exceptional experience. It is great to see another AM/PIC come together where members, spouses, children and guests have a good time while learning about another state. Members have opportunities to learn from other members across the country and often along with their family enjoy the local activities.

One pleasure of being treasurer is writing checks to our members being recognized in one of our many awards programs and paying for functions at the AM/PIC where members are acknowledged for their expertise with programs they have provide to their clientele.

I am very appreciative to the Tennessee association for nominating me for treasurer and to the administration of the University of Tennessee Extension for allowing some of my time to be diverted to NACAA duties. It has been a valuable learning experience and a great opportunity to provide service

to an important professional association. NACAA is unique in how it values it members and their families and hopefully it will always stay that way.

I sincerely appreciate the trust placed in me by the members of NACAA and I will strive to keep “watching the road” financially during my remaining time as NACAA treasurer.

Policy Chair Chuck Otte, Kansas



The policy Committee has the responsibility of safeguarding the intent of the NACAA By-laws, assist in the preservation of the NACAA professional standards, review reports and proposed actions before they are presented to the Board of Directors and to offer an opinion (when requested) on new measures before action by the Board of Directors, Committees, and the membership. The Policy Committee also tries to offer a historical perspective, to clarify/interpret policy and propose measures to meet the challenge of change, as well as revise the pages of the NACAA Policy Manual as needed. This may sound like an easy job, but it keeps one busy and on your toes!

Policy Chairs serve for two years and are past National Presidents. This was my second year and I will be handing responsibility of this committee to the very capable Rick Gibson. I’ve been forwarding files and thoughts to Rick as he prepares for his two year stint at the helm of the Policy Committee.

In recent years we have had many of our past presidents retire shortly after completing their term on the board which tended to keep the membership of the policy committee on the lean side. In recent years we’d been inviting many of the recent past presidents, whether they were active or life members, to sit in on the policy committee meeting at AM/PIC just to have more input. With that in mind, a proposed by-laws change was forwarded to the Voting Delegates at last year’s AM/PIC that would make the Policy Committee comprised of all past presidents from the previous ten years plus all active member past presidents no matter how long ago they served. At the present time, Gary Hall is the only active past president that served more than ten years ago. The Voting Delegates did approve the proposed by-laws change and the Policy Committee thanks them for this. The Policy Committee Chair is still an active member, if one is available to serve.

This is an example of how the Policy Committee and NACAA need to be constantly looking at how the changing times are changing the association. The NACAA Board has looked at a

lot of changes over the past several years and we have initiated some major re-writing of the Policy Manual to reflect those changes. After the massive rewrite of Section 6 - Committees last year, the Policy Manual review committee (thank you Mark and Janet!) had a somewhat easier task this year as we updated Section 3 - NACAA General Policy.

As we move through each year the Policy Committee Chair is routinely asked for interpretations of policy. Some of these are pretty straight forward but sometime those questions are sent out to the entire committee for a broader perspective or in case someone has more insight and history on a particular topic. I would encourage the membership to feel free to contact the Policy Committee Chair if they ever have questions about why policy says what it says, the history behind some of the policies or just a clearer interpretation of what is meant by a particular part of policy. For the past year, the Policy Committee has been: Gary Hall, Glenn Rogers, Mickey Cummings, Chuck Otte, Fred Miller, Rick Gibson, Phil Pratt, Stan Moore, Paul Wigley, Paul Craig and Henry Dorough. For the coming year we say goodbye to Glenn Rogers and welcome Mike Hogan to the committee and look forward to Rick Gibson serving as our chair!

As I complete my responsibilities to the Association I want to thank all members and boards I have worked with for their support and assistance. NACAA is OUR association, not just one person's association or the board's association. Anyone who has served in any leadership position in NACAA knows that we are honored and entrusted to the safekeeping of the high ethical standards of our profession and the camaraderie that comes from being a member of NACAA. Thank you for all you do for the people of your county, region, state and NACAA!

**Past President
Henry D. Dorough,
Alabama**



An old proverb believed to date around 1374 says “There is an end to everything, to good things as well.” It is the inspiration for the common phrase “All good things must come to an end.” And so, my time on the NACAA board comes to an end with the closing of the 2015 AM/PIC in Sioux Falls, SD. It’s hard for me to believe it has been 12 years since I first began my volunteer NACAA service as Southern Region Director. Along the way, I have grown both professionally and personally, made some lasting friendships, visited many states I may have never traveled to otherwise, and best of all, I met my wife.

Serving the association as southern region director, secretary and in the presidential rotation has been the most thrilling time in my career. NACAA has so much to offer those who choose to exercise an active membership. I never would have

dreamed that included romance. Who would have thought a country boy from Alabama would meet and marry a pretty county agent from New York; Upstate of course. Well, I did at the 2010 NACAA AM/PIC in Tulsa, OK, and now, five years later not only is she still a county agent, she’s also my wife. I can truly say NACAA has given back to me a great deal more than I gave to the association.

The role of past president, while important to the association, is a good wind-down period for someone just finishing their presidential year. It’s almost a reward getting to participate in some of the activities assigned to the position. The most rewarding activity by far was my opportunity to serve as judge for the National Outstanding Young Farmer program and delivering a keynote speech at their Award Congress in Cherry Hill, NJ. I met some of the brightest and most talented young farmers in the nation and will cherish their friendship for a long time to come. NACAA plays a vital role in this program by members submitting young farmer nominations from across the nation.

Most of the nominations last year came from NACAA members and the number is growing each year. As an incentive, if you nominate one of the top 10 young farmers selected, NACAA will provide you the opportunity to attend the OYF Award Banquet when four national winners are announced. Additionally, if you nominate one of the four national winners you are eligible to receive reimbursement of the registration fee for the next NACAA AM/PIC. You know who those great young farmers are, so visit with them and get their application in today.

As NACAA past president I served as chair of the Fiscal Committee to establish both an annual budget and the upcoming AM/PIC budget, attended the Post-AM/PIC board meeting in Mobile, Alabama, the Winter Board meeting in Sioux Falls, SD, the Spring Board meeting in San Diego, CA and participated in monthly board conference calls.

I also participated as a senior member of the Joint Council of Extension Professionals Board of Directors, serving on the JCEP Strategic Planning Committee and as Chair of the JCEP Policy Committee. I attended the JCEP Winter Board meeting which occurs on the front end of the JCEP Leadership Conference in Las Vegas, NV, the Public Issues Leadership Development Conference in Washington, DC, the JCEP Summer Board meeting in Portland, OR, and monthly JCEP Board conference calls.

While attending the PILD conference in Washington, DC, I was honored to visit USDA and NIFA with President Hogan and Vice President Nelson to build a common understanding of mission links between local Cooperative Extension offices and USDA, and to build future professional development partnerships between USDA/NIFA and NACAA. We had very productive meetings with various program leaders at NIFA and administrators at USDA, but the most memorable meeting was with Deputy Secretary of Agriculture, Krysta Hardin. She has a deep knowledge and fondness for Cooperative Extension and the Land Grant college.

All of the remarkable activities associated with NACAA are the result of the dedicated work of the women and men volunteering for leadership roles in our association. The full body of work of this association would not be complete were it not for the time and talent of the entire group of volunteer leaders on the state and national level. Thank you all for your devotion to NACAA.

Each member of your elected Board of Directors plays a unique and significant role in ensuring the smooth functioning of this association. I am very thankful to have had the opportunity to serve the past 12 years and create lasting friendships with a diverse group of talented individuals. Among them is our Executive Director Scott Hawbaker. Scott is the one constant from year to year that keeps the association on track and serves as counsel to keep the president sane. I am deeply grateful to Scott for his guidance and happy to call him a friend.

Finally, I want to take this opportunity to thank the Alabama Cooperative Extension System administrative team and my colleagues with the Alabama Association of County Agricultural Agents & Specialists for their continuous support during my tenure on the NACAA Board. It would have been nearly impossible for me to serve NACAA in these various roles and also keep up with the educational programs at home without all of their support. I am most grateful to them for putting a significant spotlight on Alabama with a “world-class” NACAA AM/PIC in Mobile in 2014; memories I will cherish forever.

I have enjoyed serving NACAA over the past 12 years and I will miss being involved in some of the activities. But as this great time in my career comes to an end, it is only the beginning for others in our association. The poet Maya Angelou once said “Love life, engage in it, give it all you’ve got. Love it with a passion, because life truly does give back, many times over, what you put into it.” I encourage you to look for ways to become involved in NACAA’s many leadership opportunities. You truly do get back even more than you give.

**North Central
Region Director
Brad Brummond,
North Dakota**



It has been a fast two years as director. The board continues to reach out to our brothers and sisters in the 1890s and 1994s. It is a hope of mine that we can find a way to attract members from these institutions.

We continue to struggle to find bids for our AM/PIC. We may be looking at a new multi-state model for some regions. I think that this may be where the North Central Region is heading. We need to recruit our new hires into NACAA. Our challenge is to offer benefits and training that they will find of value.

I have always believed that an organization that is not looking to the future and continually changing to meet the new realities is a dying organization. I can proudly say NACAA is an organization that is actively pursuing its future. We must continue to stay the course and be willing to try new things and maybe fail a few times. The future belongs to those who try.

**Northeast
Region Director
Peter Nitzsche,
New Jersey**



As this year’s AMPIC comes to a close, so does my term as North East Region Director. The past two years have flown by! It has been a great pleasure to visit states and get to know the membership and the incredible diversity of research and educational programs being offered.

Many of these programs have been occurring despite some very challenging budget times for Extension and in turn NACAA. Fortunately during my second year as Director I got to meet a lot of new members. I believe this new membership means we have turned the corner on at least some of our challenges and gives me great hope for the future of both Extension and NACAA.

In looking to the future, when I was first approached to run for Vice Director and Director, I was concerned that I did not understand all of the roles and duties involved in this position. In order to alleviate any concerns for future candidates for these positions I worked with the Directors and Vice Directors to develop a Regional Directors and Vice Directors Handbook. We all hope this new Handbook is a useful tool for anyone considering these positions and helps them to carry out their roles.

I certainly hope that I have carried out my role as Regional Director to the benefit of the membership in the Northeast. I know that I have benefited greatly from the opportunity to serve as Director. I learned a lot, made new friends and even managed to have some fun now and then. I want to thank all the members of Northeast for supporting me and the NACAA Officers and Board members who served alongside me in this great professional association.

**Southern
Region Director
Michael Heimer,
Texas**



It has been an honor and a privilege to serve the membership of the Southern Region and work with the NACAA Board. The more time you spend involved with this organization, the better appreciation you develop for the tremendous opportunities provided by the NACAA. It is hard to find an organization that can provide Extension Professionals with the depth of professional development, leadership opportunities, program recognition, and the potential to network with such a diverse experience base. These attributes make NACAA unique. The opportunity to serve as Southern Region Director has brought a new and rewarding dimension to my experience as a county agent.

It has been a real pleasure to represent NACAA at state association meetings that I have been privileged to attend this year. We have strived to enhance communications and strengthen state associations. There are many good members giving leadership to great programs across this nation. Our members make the state associations strong which makes NACAA strong. The professionalism and dedication that defines county agricultural agents across this great nation is alive and well.

The state visits Regional Directors conduct each year give us a chance to visit with members. When we listen to our members, good things begin to happen. An example of this is the conversations ongoing with Extension Professionals from Puerto Rico. Our goal is to one day have these educators establish their own association and be eligible to take advantage of NACAA opportunities. These state visits have allowed me to update members on board actions and NACAA business. State visits provide a better opportunity to get an insight into needs and concerns of our members, that has better prepared me to represent their opinions to the NACAA Board.

I would like to thank the Texas County Agricultural Agents Association for their confidence in me and allowing me to serve the Southern Region. It has been my pleasure to represent NACAA at the state association meetings. Each and every time I come away from each state's meeting impressed with the professional can-do attitude that the agents have not only for their own state association, but also for the national association. Extension professionals look at a problem and turn it into a challenge that can be addressed.

The past year has strengthened my commitment to NACAA and I would like to urge every member to take advantage of the opportunities that the association can provide to them. I would also encourage our members to become more involved in their state and national associations in whatever way possible

as I am certain that they will find that their investment in time and effort will be repaid in multiple ways over the course of their careers as a County Agricultural Extension Agent.

The National Association of County Agricultural Agents is celebrating 100 years of service to the residents of this great Nation. The mission of each and every Extension Agent is to help make the lives of our clientele the best that it can be. If we continue to work together, we can make those goals a reality.

**Southern
Region Director
Lenny Rogers,
North Carolina**



My first year as a Southern Region Director has rapidly flown by. I truly have enjoyed attending several of the southern state association meetings.

I have attended the North Carolina, Mississippi, Virginia and Tennessee state meetings and have enjoyed representing NACAA at their business meetings, attending their professional development sessions and just interacting with agents from these states. Another duty of mine this past year was serving on the Public Issues Leadership Development (PILD) planning committee and assisting with that conference in April of this year. The conference went extremely well as we attended many great breakout sessions, conversed with our USDA National Program Leaders, celebrated the 125th Anniversary of the 2nd Morrill Act, and held many rewarding visits with our Congressmen on Capitol Hill.

I truly want to thank the North Carolina Association of County Agriculture Agents for their faith in nominating me for this Southern Region Director position. I will continue to do my best to fulfill my role in this position. I also want personally thank second year directors, Mike Heimer and Pete Nitzche, for direction and helping keep me straight on my many duties this past year.

Finally I want to encourage each of you to become even more involved in our association. The professional development, leadership skills gained, knowledge of other state's activities, and individual friendships far outweigh any sacrifice on your part. If you are not very involved with your own state's association, begin by serving as a district or state committee member, then you'll be ready for a district or state officer. Before you know it, you will be ready to apply for a National Committee member or other National Leadership position.

I look forward to seeing each of you at our 2015 NACAA AMPIC in Sioux Falls, South Dakota this July. There, in many unique ways, we will proudly celebrate the 100th Year Anniversary of NACAA.

**Western
Region Director
Janet Schmidt,
Washington**



Greetings from the Western Region! I am honored to represent the Western Region on the NACAA board. It is a great opportunity to work with so many talented and dedicated extension professionals, on the board and in the states.

For over 30 years, I have been an active member of NACAA and Washington Extension Agents and Specialist Association. I have served in many leadership roles at state and national levels. It is a rewarding experience to serve on the board and help shape the future of NACAA and the Extension profession. NACAA provides many benefits and opportunities for the membership. One of my goals is to inspire members to take advantage of the many opportunities provided by NACAA, whether it be applying for an award, giving a presentation or being published in the Journal of NACAA.

So far this year I have attended three state meetings in the Western Region with more planned in the future. I appreciate the warmth and hospitality that I have experienced while on these state visits. I also commend the state association leaders for the high quality programs they have planned. I have learned much from all of you! It has been a lot of fun working with the Directors and Vice-Directors as we planned the NACAA component of the JCEP meeting and workshops at the AM/PIC. Our goal was to plan an informative and meaningful exchange of information. The venue was the Tropicana in Las Vegas, which will be the site next year as well. The featured speakers were exceptional, so I highly encourage the states to send their leadership team to the next JCEP meeting. Regarding professional improvement, Alaska will be hosting the Western Region Professional Improvement Conference in Anchorage September 23-24, 2015, at the BP Center. It will be a beautiful setting with time scheduled for presentations, posters and an exceptional tour.

In closing, I want to thank my colleagues in Washington for giving me the opportunity to serve as Western Regional Director for NACAA. This opportunity only comes once in a person's career. I also want to thank Washington State University Extension Administration and co-workers for supporting me in this endeavor. Last but not least, a huge thanks to my supportive husband Tim who takes care of our "four-legged" kids while I am traveling and attending meetings.

As always, if I can answer questions or carry messages to the board, please do not hesitate to contact me. I look forward to serving another year as Western Regional Director for NACAA. See everyone in Sioux Falls, South Dakota, for the 100th celebration of NACAA!

**Professional
Improvement Council
Chair
Mary Sobba,
Missouri**



The Professional Improvement Council (PIC) is one of the three Councils that make up the committee structure of NACAA. The purpose of this council is to further the professional improvement of our members. The Council consists of six committees: Ag Economics & Community Development, Agronomy & Pest Management, Animal Science, Horticulture & Turfgrass, Natural Resources/Aquaculture and Sustainable Agriculture.

The educational activities consist of presentations, educational tours, super seminars and even one demonstration planned for AM/PIC. There will be excellent variety of presentations in Sioux Falls. Eighty-four member presentations and three super seminars are planned, so there will be a wide variety of topics.

Animal Science, Horticulture and Sustainable Agriculture have planned educational and fun pre-tour educational opportunities. Sustainable Ag is working with North Dakota on a soil health tour, which will begin in North Dakota. This is the first time for this type of tour. Animal Science and Horticulture have tours beginning in Rapid City with a variety of stops throughout the state

Sustainable Agriculture has chosen four new fellows using a new system where each state may nominate two individuals. The committee is planning a hospitality function for members to learn more about the SARE Fellowship program. Watch for details in Sioux Falls for the hospitality room number.

There will be three super seminars this year. The first will be Sunday afternoon sponsored by the sustainable ag and horticulture committees titled "USDA's Organic Literacy Initiative and eXtension Community of Practice". In addition, there will be two super seminars on Wednesday. Ag economics has planned "How to Survive the Roller Coaster Markets". The agronomy committee will sponsor "The Use of Unmanned Aerial Vehicles (Drones) in Agricultural Production and Extension". These seminars will be excellent sources of information, so please attend. Agronomy is also working on a UAV demonstration so watch the email for details.

NACAA is an organization with numerous opportunities for professional development and leadership. One method of involvement is through the committee structure, which provides a way for members to share their talents for the benefit of NACAA. This next year, I encourage you to try something new with NACAA, apply for a committee position, participate in a pre-tour, apply for an award or something else. This is our organization and we need each member actively involved.

Finally, with sincere gratitude, thank you to the committee chairs and vice chairs and state chairs. I truly appreciate your hard work and dedication. Your efforts in teleconferences, emails and other communications are what make this committee structure successful. I am looking forward to seeing the individuals doing much of this work the past year in Sioux Falls.

**Agronomy and Pest Management Chair
Paul Cerosaletti,
New York**



Committee members:

Paul Cerosaletti, NY – Northeast region

Wade Parker, GA – Southern region

Jeff Anderson, NM, - Western region

Bruce Clevenger, OH – North Central region

This year has been a busy year for the Agronomy and Pest Management committee following a successful AMPIC in Alabama in 2014. Much of our year has been focused on organizing an exciting super seminar for the 2015 AMPIC in South Dakota, **The Use of Unmanned Aerial Vehicles (Drones) in Agricultural Production and Extension**. The super seminar will take place on Wednesday July 15, from 1:00 – 4:00 PM. We have the following excellent speakers lined up.

Kurt Nolte, PhD, - University of Arizona - Agriculture Agent - The School of Plant Sciences, Yuma County Extension Director, Yuma Agricultural Center Interim Director, Regional Vegetable Production Specialist

Topic: UAV hardware platforms and Image processing

John F. Nowatzki, MS; North Dakota State University - Agricultural Machine Systems Specialist, Department of Agricultural and Biosystems Engineering

Topic: Potential Uses for UAV technology in crop and animal agriculture: The ND State UAV “Proof of Concept” project. This project is demonstrating the use of UAV technology across a broad range of applications in agriculture from crop production, pest management and livestock management.

Bill Verbeten, MS; Cornell University Cooperative Extension – Regional Field Crops Specialist – Northwest NY Dairy, Livestock and Field Crops Team; Project Principle; Northwest NY UAS Crop Project.

Topic: Considerations for getting started using UAVs in

agriculture and agricultural extension programming.

In addition to these talks our speakers will have several examples for super seminar participants to see of the various types of UAVs that are currently in use.

In addition to organizing this super seminar, the committee was again busy this spring soliciting and reviewing abstracts for oral presentations at the AMPIC in SD. We received twenty one abstracts and will be hosting nineteen presentations on Tuesday July 14 of the AMPIC from 1:30 to 4:00 PM.

Making oral presentations are a great way to contribute to professional improvement offerings of NACAA and to showcase excellent Extension programming. Please consider submitting an abstract for an oral presentation for the 2016 AMPIC in Little Rock AR. Our featured topics for the Agronomy and Pest Management section at that AMPIC will be 1) Water Resource Management in Cropping Systems and 2) Pest Management.

We encourage NACAA members to attend the Agronomy and Pest Management committee meeting at the 2015 AMPIC in SD on Monday July 13 to help us identify professional improvement topics and venues for the future.

I would like to thank the hard work and dedication of my fellow Agronomy and Pest Management committee members over the past year, Jeff Anderson, Wade Parker and Bruce Clevenger, in preparing for a great professional improvement offering at the 2015 AMPIC!

**Agricultural Economics and Community Development Chair
Megan L. Bruch,
Tennessee**



The Agricultural Economics and Community Development committee is pleased to help further the professional improvement of NACAA members. This year's AM/PIC will include a Super Seminar and member presentations on a variety of topics important to Extension professionals.

This year's Super Seminar, called *How to Survive the Roller Coaster Markets*, will be offered on Wednesday, July 15 from 1:00 pm to 4:00 pm. Explore a different approach to marketing. Ed Usset, Grain Marketing Economist for the Center for Farm Management at the University of Minnesota, identifies common mistakes in grain marketing, such as the reluctance towards pre-harvest marketing and holding grain in storage too long. Discover that great marketing is not predicting prices, but eliminating mistakes in our everyday decisions. See

how eliminating mistakes can create a solid foundation in the development of pre and post-harvest marketing plans. This seminar is made possible by the generous sponsorship of the National Crop Insurance Services (NCIS).

A total of 12 proposals from members were received for Agricultural Economics and Community Development Professional Improvement Council presentations. After careful consideration by the committee, all 12 proposals were selected for presentation at the AM/PIC. Make plans now to join us for these presentations on Tuesday afternoon. Topics will include:

- Increasing Local Food Awareness in Your Community by Paula Burke, Georgia
- Farming: Pencil to Plow by Jessica Flores, Maryland
- A New Approach to Break-even Analysis for Ranchers by Bridger Fuez, Wyoming
- Polk County Fair and Rodeo Association Leadership Development by James Robert Hall, Arkansas
- Farmland Leasing Programming: Blending Legal and Economic Content to Reach Landowners and Tenant Farmers by Peggy Kirk Hall, Ohio
- Naturally Escarosa: Promoting Ecotourism and Agritourism in Northwest Florida by Libbie Johnson, Florida
- Web-based Tools Enhance Crop Risk Management Decisions by Steven D. Johnson - Iowa
- Organizing a Fresh Fruit and Vegetable Producer Cooperative by William D. Lantz, Maryland
- Creating Signage that Sells: Tips for Direct Farm Marketers and Agritourism Operators by Megan Bruch Leffew - Tennessee
- Helping Farm Families Plan for the Unexpected by David L. Marrison, Ohio
- Grill It Up – Beef; Consumer Options as Beef Prices Increase by Mark D. Maudin, Florida
- Building Success of Food Hubs through the Cooperative Experience by Roberta Harrison Severson, New York

The members of the Agricultural Economics and Community Development Committee are:

Southern Region Vice Chair and National Chair – Megan Bruch Leffew, TN

North East Region Vice Chair – Sandra Buxton, NY

North Central Region Vice Chair – David Bau, MN

Western Region Vice Chair – Del Jimenez, NM

Animal Science Chair Ron Graber, Kansas



Committee Members:

National Chair – Ron Graber, KS

Northeast Region Vice-Chair - Elizabeth Claypoole, NY

Western Region Vice-Chair – Kellie Chichester, WY

North Central Region Vice-Chair – Eldon Cole, MO

Southern Region Vice-Chair – Brian Beer, SC

Each year the Animal Science Committee is responsible for planning and conducting the two-day Pre-AM/PIC Animal Science Seminar and Tour. This is a tremendous professional improvement opportunity for our members and a great way to network with colleagues from across the country having similar interests. This year South Dakota members Adele Harty and Ken Olson organized the tour and will serve as our tour hosts.

The tour will begin in Rapid City with some of the highlights including: Mount Rushmore, Blair Brothers - retained ownership focusing on carcass quality traits, Jack Orwick - range sheep production, Cheyenne River Sioux Indian Reservation, R & R Pheasant Hunting, an ethanol plant and Redstone Feeders – confinement feeding.

We have great interest in the tour this year with 34 participants from 18 states planning to participate. Each year the committee seeks sponsorship for the tour with participants funding the remainder. This year we want to express appreciation to our sponsors: South Dakota SARE, Livestock Marketing Association, Merck Animal Health, Newport Laboratories, local meal sponsors and each of the tour stops.

Brian Beer, Animal Science Southern Region Vice-chair, took the lead on the professional improvement seminars. Thirteen of our co-workers will be sharing the results of successful research and Extension programs during the Tuesday afternoon seminars. Topics will focus on livestock tours, dairy employee management, calf marketing, beef reproduction, forage testing and sheep and goat production.

The Animal Science committee has made arrangements with the American Registry of Professional Animal Scientists (ARPAS) to offer certification exams during the AM/PIC on Wednesday afternoon. Contact any member of the animal science committee for more information. In addition, continuing education unit's (CEU's) will be available for those who participate in the Tuesday seminars.

The committee has worked hard to offer other professional improvement opportunities throughout the year. One method has been to develop electronic training via webinars

in collaboration with other professional organizations, i.e. the DAIReXNET webinars.

Another goal of the animal science committee was to update the promotional poster utilized at AM/PIC. Animal Science Western Region Vice-chair, Kellie Chichester from Wyoming, volunteered to complete this task. As a result of her hard work, the committee will have a new poster promoting participation and highlighting past committee activities.

Please join us Monday afternoon for a full committee meeting. We will introduce the new committee leadership and begin planning next year's committee activities.

Thank you to each of the vice-chairs! Each of you contributed great suggestions and ideas and willingly provided leadership, time and lots of effort over this past year. Also a special thank you goes to outgoing Northcentral Region Vice-chair, Eldon Cole (MO) and Southern Region Vice-Chair, Brian Beer (SC), for their contributions over the last four years.

**Natural Resources/
Aquaculture/
Sea Grant Chair
Laurel Gailor,
New York**



Committee Members:

Laurel Gailor, Committee Chair (NE)

Libbie Johnson, Southern Region Vice-Chair (FL)

Todd Lorenz, North Central Region Vice-Chair (MO)

Katie Wagner, Western Region Vice-Chair (UT)

Following the very successful, first time Natural Resource/Aquaculture/Sea Grant pre-conference educational tour that was held at the Mobile, Alabama 2014 AM/PIC, the committee thought we would try to work on a second opportunity for South Dakota. Unfortunately as they say, *best laid plans of mice and ...* The ideas flowed, the routes were being planned, but the hurdle came with the logistics of finances and other resources. The goal was to keep the cost down for participants but without a substantial sponsor, and a few other strategic elements, we decided to be realistic and focus our efforts toward developing an educational tour for the 2016 AM/PIC in Little Rock, Arkansas. Stay tuned as we will be sharing some preliminary information this summer in South Dakota.

The committee was pleased with the diversity of proposals submitted by the membership. Please join us on Tuesday afternoon from 1:30-4:00 p.m. for the following presentations:

- Educating Homeowners on Stormwater Ponds

Through Science Café – M. Atkinson

- Growing Extension Impact with Synchronized Wildlife Food Plot Demonstrations – D. Barber
- Helping Local County and Municipalities Meet Water Quality Goals Through Targeted Training and Tracking Programs – J. Takacs
- Improving Ecological Awareness Using the Bioblitz in Mississippi – B. Self
- Ohio River Basin Wetland Conservation Planning Project – J. Iles
- Web-based Preventative Blowing and Drifting Snow Control Decision Tool – G. Wyatt

Additionally, all members interested in Natural Resources, Aquaculture, and Sea Grant program areas are invited to attend the committee meeting that will be held on Monday from 1:30 – 2:30 p.m. The meeting will focus on plans for the 2016 AM/PIC, and any suggestions that you as a member would wish to share with the committee will be welcome. The support from the respective state representatives of each of these areas would be appreciated as well.

Lastly, I have enjoyed working on this committee over the past four years and I am amazed how quickly the time passed. I would like to thank Libbie Johnson, Todd Lorenz, Katie Wagner, and past committee chair Dan Downing for their efforts this past year; additionally, a huge thank you to Mary Sobba for her guidance and leadership during this year. The new committee chair and northeast representative will be shared following the approval of the national board at the 2015 AM/PIC – see you in South Dakota.

**Horticulture &
Turfgrass Chair
Bill Sciarappa,
New Jersey**



Committee Members

Bill Sciarappa, Committee Chair

Sarah Denkler, North Central Region, Vice chair

Annette Meyer Heisdorffer, Southern Region, Vice Chair

Ronald Patterson, Western Region, Vice Chair

Nick Polanin, Northeast Region, Vice Chair

Our Horticulture and Turfgrass committee looks forward to an exciting annual conference in South Dakota. We have spent considerable time in developing an excellent slate of 22 presenters covering a diversity of Extension topics such

as: Commercial Production, Landscaping, Turf, General Horticulture and Master Gardeners. We have planned a pre-conference tour that will cover the length of the state from West to East. We sincerely thank our sponsor Bonnie Plants and their representative Cheryl Lange for this special opportunity to network with our colleagues for an extended period.

As arranged by our local host and tour guide, Dr. John Ball of SD State will start us off on Friday July 10th in Rapid City around 2-3:00 pm. After settling in our hotel, we bus to the Prairie Berry Winery for dinner and then proceed to Mount Rushmore for a special tour and the Lighting ceremony. Saturday morning we bus to breakfast at the famous Old West Wall Drugstore and cruise through the Badlands. Stopping at the Lakota Tribe Gardens, these original Americans will show us their native plants, medicinal species and permaculture. Time permitting we hope to visit a fruit tree plantation with sweet cherries and melon production before we overnight around Pierre - the capital approximately 150 miles travel.

Sunday morning we may visit Andersons Tree Nursery and a Scottish Links golf course and view a few bison before arriving at Sioux Falls around 12 pm for the NACAA Chairs luncheon. Members and their spouses are invited but seating is limited..

Please join us for the Horticulture and Turfgrass committee meeting on Monday afternoon July 13 where we will discuss horticultural issues and introduce the new committee leadership to begin planning for 2016. On Tuesday July 14 from 1:30 to 4:30 we offer 22 professional improvement presentations ranging from plant diagnostics, specialty crops, water management, pesticide use, pest problems, landscaping, online education and Master Gardeners.

Finally, we offer our sincere appreciation to our regional vice chairs and state chairs as well as the NACAA leaders/organizers/officers, especially Mary Sobba and Scott Hawbaker for their guidance and advice over this past year.

**Sustainable Agriculture
Chair
Steve Van Vleet,
Washington**



What an exciting time to be part of the Sustainable Agriculture Committee. Sustainable agriculture has been on a steady increase for many years and the support by USDA-SARE makes the sustainable agriculture programs run by NACAA in a collaborative partnership with USDA-SARE only that much stronger.

This year the Sustainable Agriculture Committee is honored to sponsor a seminar by Betsy Rakola (USDA Organic Policy Advisor) and representatives with eXtension on “USDA’s Organic Literacy Initiative and eXtension Community of Practice” This seminar will be held July 12th, 2:30 pm at the

NACAA AM/PIC

The Sustainable Agriculture Committee not only has professional presentations on sustainable agriculture presented at the NACAA Conference but is also in charge of the SARE Fellows program. 2015 was another exceptional year for the SARE Fellows program with 21 applicants. The NACAA state sustainable agriculture chairs did an excellent job of screening the number of applicants down to two per state. The committee is looking forward to increased awareness of this wonderful program and applicants from every state in 2016.

After reviewing the 21 applications for the 2015 SARE Fellows program, four Fellows have been selected, one from each of the four NACAA regions. The 2015 Fellows are:

Crystal Stewart (NY), Northeast Region

Troy Salzer (MN), Northcentral Region

JJ Jones (OK), Southern Region

Stacey Bealmear-Jones (AZ), Western Region

Each group of four Fellows participates in four sustainable agriculture tours, rotated among the four regions, over a two-year period. Travel costs to the seminar tours are covered by USDA-SARE. In addition to the educational experiences, successful participants of the Fellows Program receive a USDA-SARE library courtesy of SARE Outreach in Washington, DC, and a \$1,500 stipend to be used for program support, materials or hardware after completing the entire two-year program. At the completion of the fellowship, each participant will be expected to conduct an educational or research program within their home state discussing or exploring some element of sustainable agriculture. The fellow will provide a scope of work and budget showing how the funds (\$1,500) will be spent. A final report will be submitted and include a discussion summarizing your learning experiences and a detailed list of specific impacts gained from your fellow opportunity.

The exiting SARE Fellows from 2012 will present on their experiences at the SARE Fellows luncheon on Tuesday, July 14, 2015, at the NACAA AM/PIC Conference in Sioux Falls, South Dakota. Also, at the luncheon the incoming 2015 SARE Fellows will be recognized. The luncheon is sponsored by SARE.

The sustainable agriculture committee spends a great deal of time reviewing abstracts for presentations at the sustainable agriculture professional improvement seminars in Sioux Falls. This is the seventh year that we have provided professional improvement seminars under the topic of “Sustainable Agriculture.” The Sustainable Agriculture presentations will be held the afternoon of Tuesday, July 14.

It is my pleasure to serve as the National Chair for the Sustainable Agriculture Committee; much of the success of the Committee would not be possible without the hard work and dedication of its regional vice-chairs. The Sustainable Agriculture Committee work, the SARE Fellows Program and

the collaborative partnerships established through NACAA have made a positive impact on me and my career.

The Sustainable Agriculture Committee looks forward to upcoming NACAA conferences and the continued success of the SARE Fellows Program and sustainable agriculture seminars. I would like to give a special Thank You to all the individuals involved in the guidance of the Sustainable Agriculture Committee and for making this professional improvement council a huge success.

**Extension
Development Council
Chair
Kurt Jones, Colorado**



The Extension Development Council's (EDC) committees -- Administrative Skills, Agricultural Issues and Public Relations, Early Career Development, and Teaching and Educational Technologies – help members improve their skills related to the art and science of Extension practice. This focus on skills and methodologies to conduct Extension work effectively makes NACAA unique from other subject-specific professional organizations.

The Council's efforts at the 2015 AMPIC include 19 informational seminars on Tuesday morning, July 14. The presentations are part of four concurrent sessions featuring 12 hours of training. There are some exciting and diverse topics that have been accepted. We hope you will join us!

Over the year, educational programming extended beyond the confines of the AM/PIC through one webinar. The Early Career Development Committee offered a "First Timers Webinar" in late April. The Agriculture Issues and Public Relations also conducted an outstanding webinar on GMO's in March of this year. These sessions are archived and available for those who missed the live broadcasts (see the NACAA website for the URL).

One piece of advice that I received as a relatively new agent was to join NACAA and get involved in committee work. It is something that I have taken to heart, and it has helped me in my career tremendously. I encourage NACAA members to increase your participation in the Extension Development Council's activities, and offer guidance and ideas on how we can better to serve your needs. Please share any ideas with your State Committee Chair or Regional Committee Vice-Chair, or attend out Committee Workshops on Monday afternoon, July 13 at the AM/PIC.

Finally, I offer my appreciation to our committee chairs, regional vice-chairs and state chairs as well as Vice President Nelson for their individual and collective leadership and guidance during the past year. I also sincerely appreciate the mentorship of my co-Council Chairs and the previous EDC Chair, Dan Kluchinski, as I have worked through my first year in this role...Thank you!

**Ag Issues and Public
Relations Chair
Don McMoran,
Washington**



Hello NACAA! The Ag Issues and Public Relations Committee has been having a wonderful year. We want to thank our outgoing chair Scott Gabbard from Indiana for his great work and leadership on the AI and PR committee as well as existing member Bill Burdine from Missouri and new members Craig Askim from North Dakota, and Meredith Melendez from New Jersey. We also want to thank Wes Smith from Georgia for his special assignment liaison position between the OYF and NACAA.

The 2014 NACAA AM/PIC In Mobile, Alabama included many outstanding professional development presentations focusing on issues and challenges facing Extension today and how they relate to our communities in the future. Each program highlighted a novel way that agriculture faculty provide an impact within the communities where they live and serve.

The National Outstanding Young Farmer Fraternity (OYF) program, sponsored by John Deere continues to be the core responsibility of the Ag Issues and Public Relations Committee. In February of this year I had the pleasure of attending the OYF annual meeting in Cherry Hill, New Jersey. If you haven't had the opportunity to take in this event I highly encourage it. Not only did I have fabulous tours of New York, New Jersey and Pennsylvania, but I also had the pleasure of meeting with the best and brightest young farmers (and their spouses) in the United States. Many of them were multi-generational farmers with a deep history, but included one couple that was a successful first generation operation that was state of the art. This year, past NACAA President Henry Dorough spoke at the event. Henry did a fabulous job making the connection between the importance of young farmers and the NACAA.

The Ag Issues and Public Relations Committee hosted a webinar March 18th on Genetically Modified Organisms (GMO) with speakers Diane Smith from Washington State University and Gregory Jaffe from the Center for Science in the Public Interest ("CSPI"). The webinar was attended by more than 100 active NACAA members and redistributed to thousands via recording. The Ag Issues and Public Relations Committee plans on hosting another webinar before the NACAA AM/PIC about the Monarch butterfly with speakers Erwin "Duke" Elsner from Michigan State University and Wendy Caldwell from the Monarch Butterfly Project.

At this year's NACAA AM/PIC the Ag Issues and Public Relations Committee is pleased to announce six speakers from around the United States will be presenting on topics of leadership, sustainability, disaster and food security. Like our predecessors serving before us, the technology may have changed but there is never a shortage of issues.

NACAA and the Ag Issues and Public Relations Committee has a lot to be proud about supporting the OYF, bringing high quality professional improvement, education and outreach to our members.

Be sure to nominate a Young Farmer from your County this year to be a part of the great OYF tradition. Application forms can be located at http://www.nacaa.com/awards/other_awards.php and are due by August 1st. Thank you for your support; I look forward to seeing you in Sioux Falls, South Dakota at the NACAA AM/PIC and in Cincinnati, Ohio for the OYF meeting.

Early Career Development Chair

**Nathan Winter,
Minnesota**



The Early Career Development Committee has been busy during this past year thanks to the efforts of our committee members:

Amber Yutzy, Pennsylvania State University Cooperative Extension

Nick Simmons, Mississippi State University Extension Service

Edward Martin, The University of Arizona Cooperative Extension

The focus of the Early Career Development Committee is to develop professional improvement opportunities that assist members with early career development. The education provided typically involves tools and resources to help an early career employee to succeed. Presentations at past conferences have included mentoring, promotion, work/life balance, and publishing in professional journals.

One of the educational programs developed by the Early Career Development Committee is educational sessions at the 2015 AM/PIC in Sioux Falls, SD. Six abstracts from members have been accepted for presentation. These topics are applicable to more than just early career professionals. Following is a list of accepted presentations:

Creating Successful Award Applications, And Why They are Important

Jenny Carleo, Rutgers NJAES Cooperative Extension

8:30 – 9:00 a.m.

Make a Good County Program into a Good National Program with Proper Curriculum Development

Eric Barrett, Ohio State University Extension

9:00 – 9:30 a.m.

Living the Life of Extension Professionals – The Rest of the Story

David Marrison, Ohio State University Extension

Chris Penrose, Ohio State University Extension

9:30 – 10:00 a.m.

Express Yourself: How to Give a Presentation of a Lifetime

Heather Weeks, Pennsylvania State University Cooperative Extension

10:00 – 10:30 a.m.

e-VALUE-ation

Kevin Camm, Virginia Cooperative Extension

10:30 – 11:00 a.m.

Painlessly Publishing in the Journal of NACAA

Stephen Brown, University of Alaska Fairbanks

11:00 – 11:30 a.m.

The other main product of the Early Career Development Committee was the NACAA AM/PIC First Timers Webinar held on Thursday, April 30th 2015. The purpose of this webinar was to better prepare participants for the 2015 AM/PIC by reviewing the conference program, logistics, and the registration process. Approximately 25 participated in the live presentation and the presentation was also archived. We partnered this year to incorporate more information from the committee working with First Timer's at the AM/PIC. The First Timer's Reception will be held on Sunday, July 12th, the luncheon on Monday, July 13th, and this year the goal is match mentors with first time attendees.

State Early Career Development Chairs and other parties interested in early career development issues are encouraged to attend the Early Career Development Committee meeting at this year's AM/PIC. Our meeting will be held on Monday, July 13th from 1:30 – 2:30 p.m. Your ideas will be useful for the development of goals for the 2015 – 2016 year and the 2016 AM/PIC. Please share your thoughts and ideas with any of the committee members. We look forward to seeing you in Sioux Falls, SD!

Administrative Skills Chair

**Bruce Barbour,
New Jersey**



Four engaging presentations have been lined up for the Administrative Skills sessions at our Sioux

Falls meeting! Peer learning, mentorship and promotion committees, visioning and futuring, and a phenomena called the “Extension Domino Effect” are the topics on tap for 2015. Your Administrative Skills Committee exists to improve and enhance the administrative skills of all NACAA members regardless of their level of administrative responsibility.

This year we plan to record the Administrative Skills presentations using a tool called Camtasia which captures the screen presentation along with the audio of the presenter. The compact movie file that results can be shared in many ways, such as website links or storage media. Playback works particularly well on smart phones, particularly if the slides are well designed with not too much data density. This can be a real boon to those of us who occasionally like to take in a webinar while eating lunch in our pickup! The exact method of distribution of these recordings has yet to be decided , so stay tuned on that.

So stop by and see us on Tuesday morning of the AM/PIC from 8:30 to 11:30 am or watch for notice of where to find the recordings sometime after the meeting. Either way we hope you enjoy the program!

The Administrative Skills Committee consists of:

- Ayman Mostafa, Western Region Committee Vice-Chair
- Bruce Barbour, Northeast Region Committee Vice-Chair and National Chair
- Paul Westfall, Southern Region Committee Vice-Chair;
- Chris Bruynis, North Central Region Committee Vice-Chair

**Teaching and Educational Technologies Chair
Connie L. Strunk,
South Dakota**



The Teaching and Educational Technologies Committee is excited to help members improve their skills related to the art and science of Extension practice. Some of these opportunities will be taking place in Sioux Falls, South Dakota during the 100th National AM/PIC while some of the other opportunities will take place throughout the rest of the year.

Our committee has been trying to focus on emerging and established technologies which can make all educators more efficient and effective with our teaching and Extension programming.

Plan to join the Teaching and Educational Technologies Committee on Tuesday, July 14, 2015 in Sioux Falls, SD at 8:30 a.m. to 11:30 a.m. for our educational session. Our session will feature speakers focusing on apps for smart phones, social media, mobile production studios, and virtual learning platforms.

Our committee is excited to share the following presentations with you:

Irrigation Decision-Making Tools for Producers: Four Apps For Smart Phones And Tablets;

iGrow: An Educator's Perspective on Utilizing SDSU Extension's Teaching Platform;

A Team Approach For Utilizing Social Media To Educate Farmers And Ranchers;

Creating Farmer-to-Farmer Networks For Beginning And Small Farmers; and

Field On The Move: Producing Live, Field-Based Educational Workshops Via Mobile, Outdoor Production Studio.

State Teaching and Educational Technologies Chairs and other parties interested in teaching and educational technologies are encouraged to attend the Teaching and Educational Technologies committee meeting at this year's AM/PIC on Monday, July 13, 2015 from 1:30 – 2:30 pm. Your ideas will be useful for the development of goals for the 2015-2016 year and the 2016 AM/PIC. If you cannot attend, please share your thoughts and ideas with any of the committee members throughout the year.

The Teaching and Educational Technologies Committee consists of:

Connie L. Strunk, National Committee Chair and North Central Region Committee Vice-Chair;

Michele Bakacs, Northeast Region Committee Vice-Chair;

Jerry Clemons, Southern Region Committee Vice-Chair;

Susan Kerr, Western Region Committee Vice-Chair

**Program Recognition
Council Chair
Richard Brzowski,
Maine**



The Program Recognition Council (PRC) is one of the three Councils that comprise the committee structure of NACAA. The purpose of this council is to provide a vehicle to recognize and encourage the professionalism, performance and programs of NACAA members. The PRC consists of seven committees: 4-H and Youth; Communications; Professional Excellence; Public Relations; Recognition & Awards; and Scholarship and Search for Excellence. These committees help the NACAA recognize the outstanding work of our members in their respective county, region and state. Each year the committees review hundreds of entries to determine state, regional and national winners. The activities of this council focus on special personal recognition, presentations, programs, posters, professional development and other forms of recognition at the AM/PIC. In July, there will be a wide variety of presentations in Sioux Falls, South Dakota recognizing the great work of NACAA members. I encourage you to attend sessions with the purposeful goal of identifying programs and methods for your possible use. Attending specific sessions is effective way to meet and network with other agriculture service professionals.

- *Personal Column had 70 entries
- *Feature Story had 60 entries
- *Individual Newsletter had 48 entries
- *Team Newsletter had 35 entries
- *Video Presentation had 65 entries
- *Fact Sheet had 52 entries
- *Publication had 68 entries
- *Web Site had 41 entries
- *Learning Module had 19 entries
- *Bound Book had 14 entries

I am appreciative to the regional vice-chairs for the communication committee. The regional vice-chairs are: North Central Region Chair David Marrison (Ohio), North East Region Chair Donna Coffin (Maine), Southern Region Chair Tracy Robertson (Mississippi), and Western Region Chair Mark Heitstuman (Washington). I would like to thank Richard Brzowski and Scott Hawbaker for their assistance throughout the year with questions and concerns.

**Communications Chair
Sherri Sanders,
Alabama**



The communications committee is pleased to report that Bayer Advanced has continued sponsorship of the Communications Awards Program for 2015. Our committee has worked diligently to expedite the judging of all entries in a timely fashion.

We continue to see large numbers of entries in the fourteen communication award categories. The caliber of award entries is outstanding. Our members are producing excellent materials and are to be commended for the quality of their submissions. As a whole, the competition was very close and the quality of submitted items was top-notch. Our numbers were up significantly from last year.

- *Audio recording had 33 entries
- *Published Photo and Caption had 25 entries
- *Computer Generated Graphics had 42 entries
- *Promotional Piece had 93 entries

**Search for Excellence
Chair
Stanley A. McKee,
Pennsylvania**



The current Search for Excellence (SFE) committee is comprised of four regional vice chairs and myself. The regional vice chairs include Amy-Lynn Albertson from North Carolina, Stacey Bealmear-Jones from Arizona, Travis Harper from Missouri, and Greg Strait from Pennsylvania.

The committee held an organizational meeting by conference call in November 2014. We discussed procedures for promoting SFE entry submissions and for scoring the entries to be received. A description of the criteria was posted on the awards section of the NACAA website for consistency in judging entries. During the conference call we also confirmed the division of responsibilities regarding the SFE categories that each would lead. They were as follows:

- Landscape Horticulture – Stacey Bealmear-Jones
- Livestock Production – Greg Strait
- Crop Production – Travis Harper
- Young, Beginning, or Small Farmer – Greg Strait

Forestry & Natural Resources – Travis Harper

Farm & Ranch Financial Management – Amy-Lynn Albertson

Farm Health and Safety – Amy-Lynn Albertson

Sustainable Agriculture – Stan McKee

The committee held another conference call in March to check in as a team. Each regional vice chair was responsible for organizing a team of judges for each respective category, judging the entries, and reporting the results to me by May 1, 2014. All the entries forwarded by the states were judged before the end of April, and National winners were notified by very early May. The number of completed entries per category was as follows:

Landscape Horticulture – 12 completed entries

Livestock Production – 15 completed entries

Crop Production – 15 completed entries

Young, Beginning, or Small Farmer/Rancher – 17 completed entries

Forestry & Natural Resources – 8 completed entries

Farm and Ranch Financial Management – 4 completed entries

Farm Health and Safety – 6 completed entries

Sustainable Agriculture – 11 completed entries

The total number of entries received was 27 higher than last year, but seems to be lower than what it should be. SFE entries are not difficult to prepare and submit, and the program provides a great opportunity for individual and team recognition. Our 2015 winners and finalists will be recognized during their respective SFE luncheons at the upcoming AMPIC. The committee will continue to promote the SFE awards program, and encourage more applications next year.

The new category this year for Forestry and Natural Resources was a solid addition, and received 8 completed entries, which was more interest than typically was demonstrated for Remote Sensing and Precision Ag. There are still opportunities for sponsorship with this new category, and suggestions of potential sponsors would certainly be welcome.

Thanks:

Thanks to each state chair for their efforts in promoting SFE to their membership and selecting state winners.

Thanks to each regional vice chair for all their efforts to facilitate the judging of the entries and the other associated tasks of the committee.

Thanks to Program Recognition Council Chair Richard Brzozowski for his assistance and support during the year.

Thanks to the NACAA Board for their support of the Search

for Excellence program.

Thanks to NACAA Executive Director, Scott Hawbaker for his support and assistance to me when questions or situations with entries arose. He was always prompt and provided exceptional follow-up.

4-H Youth Recognition Chair Chris Penrose, Ohio



Almost all agricultural agents conduct some 4-H and youth programs and many of our members have a significant appointment in 4-H. The purpose of the Excellence in 4-H Youth Programming Committee is to recognize those that have developed exceptional programs. This year was no exception. We had 17 entries for awards this year, more than twice as many as in 2012. One task the committee worked on over the past several years was to increase awareness that this is not a 4-H award only, but also includes other youth related programs which is evident from the award winners and the scheduled presentations this year.

The committee was able provide eight awards this year. We have four Regional Finalists, three National Finalists and our National winner is Elizabeth Killinger, from Nebraska. Elizabeth will present her winning program “Nebraska Extension Special Garden Project” at the awards luncheon on Monday, July 13. Award winners will attend the awards luncheon to be recognized. In addition, we have eight state winners that will receive certificates.

Another charge of the committee was initiated six years ago when the committee proposed, and the board approved, the establishment of the Excellence in 4-H Program Workshop. This year we have eight presenting with all four regions represented for the Excellence in 4-H Program Workshop. Members are encouraged to attend the workshop on Tuesday, July 14, from 8:30-11:10 a.m.

Finally, I want to thank the regional directors for their help during the past year: Randy Saner, from Nebraska; Stacie Hritz, from Pennsylvania; Aubie Keese, from Oklahoma; and Allan Sulser, from Utah. I also want to thank Richard Brzozowski, the current Program Recognition Chair and JJ Jones, the past Chair for all of their help. It has been a pleasure to serve for the past four years.

**Professional
Excellence Chair
Keith Mickler,
Georgia**



In 2015 a key change was implemented within the poster session; the modification, which accepted posters are to be judged during the Annual Meeting and Professional Improvement Conference (AM/PIC).

Beginning in 2015, only the state winner (from a state poster contest) will be judged during the AM/PIC. For states that did not have a poster judging contest, the state chairs were asked to implement such a contest so to determine a state winner in the two poster categories: applied research and Extension education. We learned that many states had a poster judging contest while on the other hand many did not. The decision was left up to each state on how to implement the change.

Members, when entering their posters had the option to enter their poster as display only, or enter their states poster judging contest; and if not selected as the state winner they could still display their poster during the AM/PIC and their abstract would be published in the proceedings.

This year 117 abstracts were accepted for the AM/PIC in Sioux Falls, South Dakota, with 37 entries in the Applied Research and 80 entries in Extension Education. A summary of posters and authors will be available during the poster session allowing one to easily locate posters of potential interest.

Posters must be in place no later than 1:00 p.m. Sunday, July 12th through Tuesday, July 14th, 2015. "Meet the Authors Poster Session" will be from 11:45 a.m. until 1:15 p.m. Monday, July 13th, 2015.

National, regional, and state winners will be formally announced and recognized during the poster session awards breakfast that will be held on Tuesday, July 14th starting at 6:30 a.m. Syngenta Crop Protection will sponsor the 2015 Poster Session Awards Breakfast.

During the awards breakfast the top three posters in each category will receive a cash award, plaque, and ribbon, regional winners will receive a certificate and ribbon, state winners will receive a certificate.

Judging criteria is posted on the NACAA website for participants to consider prior to preparing their abstracts and posters. Poster scores will be made available to all participants at the "Poster Session Awards Breakfast."

We wish to thank members who have agreed to volunteer their time to judge posters during the 100th NACAA Annual Meeting and Professional Improvement Conference. Without your help, the mission of judging posters would be near impossible. Thank you to state and regional vice-chairs for a prodigious job in making the poster session happen again in 2015.

Current regional vice-chairs are: North Central Region, Eric Barrett; North East Region, Mike Haberland; Southern Region, Gene McAvoy; and Western Region, Mylen Bohle. The Professional Excellence committee is responsible for organizing and conducting the poster session before and during the AM/PIC. It takes a lot of dedication and work to make this happen and without the regional vice-chairs and state chairs the poster session would not be possible.

NACAA endorses the poster session as a very important method of presenting Extension programming and applied research results to members.

**Public Relations
Chair
Paula Burke, Georgia**



The Public Relations committee is responsible for conducting the Agriculture Awareness and Appreciation Awards (A4) program. The A4 program is a great way for NACAA members to highlight educational programs that demonstrate the public relations side of Extension work, as well as enhance the understanding of agriculture in our communities.

The A4 program had 16 examples of outstanding quality and public relations work. There is a tremendous amount of great work that many are doing, some of which would make excellent entries in the A4 program. We challenge all of you to make an effort to enter the A4 Awards program in 2016.

Congratulations to Joanna Coles from Kentucky, who is the A4 program national winner. Joanna will present her winning entry during the A4 awards recognition luncheon on the Warren County Agriculture Awareness. Congratulations also go national finalists Tracy Behnken from Nebraska, and Gary Fredricks from Washington. State winners are Rick Miller from Kansas, Libbie Johnson from Florida, Brenda Jackson from Georgia, Mark Blevins from North Carolina, Creig Kimbro from Tennessee, Laura Siegle from Virginia, and Leigh Ann Marez from New Mexico.

A sincere thank you to all of the Public Relations Committee regional and state chairs for their commitment to the committee.

The Public Relations committee is looking forward to having entries from all of the four regions in 2016. The Public Relations committee challenges each of you to submit an entry in the NACAA awards programs especially A4.

**Recognition and
Awards Chair
Stephen E. Hadcock,
New York**



The committee has undergone some transitions this year with some new faces serving as Regional Vice Chairs. We welcomed new Vice Chairs Joni Harper as North Central Vice Chair and Mary Small as Western Vice Chair. Both of these ladies became quickly involved in committee activities. We welcomed back to the committee Ronnie Helmondollar fulfilling the Northeast Vice Chair position. Ronnie is no stranger to the work of the committee and greatly appreciate his experience and input. Continuing as Southern region Vice Chair is Keith Perkins. Keith has provided great leadership in the Southern region.

Making our jobs easier are the many state Recognition and Awards State Chairs. The state chairs helped to make our jobs easier this year with the cooperation and adherence to deadlines set by our committee. On behalf of the National Committee, I extend our sincere thanks to them.

On Tuesday morning, 62 Achievement Award recipients will receive their awards at a Breakfast in their honor. This is the 41st year that NACAA has presented this award with this year's recipients joining 1,988 fellow Achievement Awards winners. The 2015 Achievement Award winners have demonstrated their ability to execute high quality programming for their clientele and gained the respect of co-workers. Achievement Award recipients have accomplished this in less than 10 years. A special thank you goes to NACAA President Mike Hogan and American Income Life's Bill Viar, who will assist with the awards presentation on Tuesday morning.

The Committee is tasked to facilitate the selection of Hall of Fame recipients each year. This is the 10th year for this prestigious award. Four outstanding Hall of Fame winners will receive their awards on Monday's general session. The recipients have received many awards of achievements during their careers and beyond in assisting their clientele, along with fellow agents and specialists of the Extension Programs in their respective states and regions of the country. They have extensive achievements and provide leadership for professional organizations, churches, and humanitarian service organizations. This year's inductees make one proud to be a member of NACAA.

This year is the 77th year to present the Distinguished Service Award. Wednesday evening at the Annual Banquet. The Distinguished Service Award will be presented to 60 NACAA members from across the country. These members were chosen by their respective states to receive one of the highest awards presented by the NACAA in 2015 and join 7,151 past recipients. The members represent two percent of their state membership, providing outstanding educational programming, are respected by their clientele and co-workers, and have worked for more than ten years.

The Committee wishes to express a special thank you to the sponsors of the Awards that will be given during our centennial AM/PIC. Thank you to John Deere and Company for their sponsorship of the Hall of Fame award for the tenth year. We want to express our appreciation for the continued support of the Achievement Awards Breakfast by American Income Life Insurance Company for 42 years and they have provided sponsorship for 47 years overall to NACAA programs. Altria Client Services is the sponsor of the Awards Booklet and the committee wishes to say thank you for your continued support of the Annual Banquet.

Finally, I want to express my appreciation and what an honor it is to serve as Chair of this committee. One cannot but feel pride and the sense of accomplishment when reading the abstracts of this year's recipients. They all are entitled to this recognition and the committee is proud to do what we can to make it happen.

**Scholarship Chair
Dwane Miller,
Pennsylvania**



The Scholarship Committee is charged with the responsibility of promoting the scholarship program by obtaining funds from NACAA members, friends of NACAA, and others interested in the scholarship effort. The committee works with the NACAA Educational Foundation to award scholarships for professional development to NACAA members. Primary activities include: promotion, review, and awarding of scholarships; administering the live and silent auction at the AM/PIC; and soliciting donations to the scholarship program through various means. I would like to say thank you to the members of the Scholarship Committee for their hard work during the past year: Wayne Flanary, North Central Region Vice-Chair; Linden Greenhalgh, West Region Vice-Chair; Donna Hamlin Beliech, Southern Region Vice-Chair; David Handley, Northeast Region Vice-Chair; Charles Moody, Life Member Representative, and all of the state chairs. I would also like to recognize the NACAA Educational Foundation for their help and support of the scholarship program. Through their guidance and stewardship of the investments, we continue to be able to provide funding for excellent professional development activities.

The scholarship committee continues to work with state scholarship chairs to encourage donations to the scholarship program. During the period of June 1, 2014 through May 15, 2015, NACAA members and friends contributed \$21,427.50 to the scholarship program. This represents an increase of over \$14,500 from a year ago - thank you all for your generous support! Why such a drastic increase? One of the biggest reasons is because of a special fundraising campaign. To

honor our 100th anniversary, the “100 for the 100th” fundraising campaign has received \$7,876 to date...what a wonderful show of support to honor our organization, while helping to perpetuate the scholarship program! We will continue to receive contributions towards this effort through June 1, 2015. I would like to thank Cynthia Gregg and Frank FitzSimons for their tremendous help in this effort. Other contributions are made through the live and silent auction as well as the cash drawing held as part of the AM/PIC.

The Scholarship Committee would like to recognize the following members for reaching designated giving levels to the NACAA Scholarship Program during the period of June 1, 2014 through May 15, 2015. Certificates of appreciation will be awarded to these members during the regional meetings at the Sioux Falls AM/PIC:

\$100-\$249

North Central Region: Emily G. Adams, Dan Downing, Rebecca Finneran, Heather Gessner, Matt Herring, Gary W. Lesoing, Jon R. Neufelder, L. Andrew Norman, William B. Phillips, Tim Schnakenberg, Dave Stenberg and John A. Wilson

Northeast Region: Jerry Bertoldo, Brandy E. Brabham, Jenny Carleo, Nicole Carutis, Anita L. Deming, Mike Haberland, Amy A. Rowe, Heather Weeks and David J. Workman

Southern Region: Carol L. Pinnell-Alison, Lisa A. Kriese-Anderson, Gary Bachman, John W. Branch, Megan Bruch Leffew, Gary Carter, Mary A. Delaney, Nichelle Demorest, Chester Fehlis, George L. Gonzales, Colby Guffey, Libbie Johnson, Samuel M. Johnson, Lance Kirkpatrick, Cyndi K. Lauderdale, Watson Lawrence, Jerri L. Lephiew, Linda K. McClanahan, Donald Mcfeeters, Allen Owings, Glenn Roberts, Sherri Sanders, Mary Carol Sheffield, Amanda R. Smith, Hugh Soape, M. Kent Stanford, Gerald L. Thompson, Carla Vaught, Jeffery D. Via and Milford D. Welch

West Region: Stephen C. Brown, Kellie Chichester and Kurt Jones

\$250-\$499

North Central Region: Craig Askim, Heather Gessner and Gary L. Zoubek

Northeast Region: Thomas J. Gallagher, Thomas Maloney and Lee Stivers

Southern Region: Paula J. Burke, Daniel F. Culbert, Russell Duncan, Ray Hicks, Libbie Johnson, Eugene McAvoy, Edwin F. Nolley, Phillip Pratt and Debbie Roos

West Region: Randy R. Mills and Steve M. Van Vleet

\$500-\$999

Northeast Region: Stephen E. Hadcock

Southern Region: Ricky Ensley and Keith Fielder

\$1,000-\$2,499

North Central Region: Chuck Schwartau

Northeast Region: Robert C. Mickel

Southern Region: Henry D. Dorough, Alan B. Galloway and

Delbert E. O'meara

\$10,000-\$14,999

Southern Region: Larry L. Moorehead

The committee would like to remind the membership of the opportunity to submit applications for scholarships. These scholarships can be used for members' professional improvement, which can include funding advanced degrees, tours, seminars, research, or other specialized training.

- All applications are electronically completed on the NACAA website. Deadline for applications is June 1st.
- In order to be eligible for up to \$1,000 in awards, members need to be vested at \$40 in the scholarship program. Members need to be vested at \$100 to be eligible for up to \$2,000 in awards. This contribution must be made before the end of the previous year's AM/PIC to qualify (ex: contribution must be received by the end of the 2015 AM/PIC to apply for an award in 2016).
- Other criteria can be found at the NACAA website under the “Awards” tab.

Vestment in the scholarship program can occur in a variety of different ways. Here are some possibilities:

- Bring items to the silent and live auction at the AM/PIC. You receive credit for the amount the item sells for.
- Purchase tickets (\$20 each) for the cash drawing, held at the AM/PIC. Non-winning tickets receive credit for a donation to the scholarship program.
- Some states have auctions or other fundraisers in which they designate proceeds towards the NACAA Scholarship Program.
- Direct donations by individuals. New this year is the ability to donate online with a credit card! Simply visit the NACAA website and scroll to the bottom of the page. Click on “Donate to the NACAA Educational Foundation – Scholarship”

The process of submitting applications is still continuing. All applications that have been submitted by the June 1st deadline will be reviewed by the scholarship committee at the 2014 AM/PIC in Mobile. Please consider bringing an item or two for this year's auction, and taking a chance to win some cash!

**Life Member Chair
Tom Benton,
Texas**



The Life Member Team consists of Doug Warnock, Neil Broadwater and Nate Herenden who serve as Life Member Regional Chairs. I would like to extend my thanks and appreciation for the work they have done. Russell Duncan and Gene Schurman will be joining the Life Member team next year.

I am looking forward to presenting at the State Officers workshop in Sioux Falls to stress the importance of active life member chairs in each state to keep all life members active and informed. We must remember that our life members are retired but still are willing to help and support in many ways.

Each year the NACAA Life members who have gone before us are honored at the life member's business meeting with a memorial service. We will conduct a memorial again this year at the AM/PIC in Sioux Falls.

We are still seeking a Life Members program sponsor. The sponsor would have a great opportunity to interact with our membership and have a part of the program and a site in the trade show. If you know of a potential sponsor please let the committee know.

I trust that you have made plans to attend the 2015 NACAA meetings in Sioux Falls. A full schedule of life member activities has been planned by the South Dakota Agents and especially the Life Member Committee. Tours and activities will keep you busy. I am looking forward to seeing everyone there.

Many thanks to the NACAA board for the support given the life members. We are ready to assist you and NACAA in anyway that we can.

**Journal of the
NACAA Chair
Stephen Brown,
Alaska**



More than 30 articles from our members were published in the December 2014 and June 2015 issues of the Journal of the National Association of County Agricultural Agents. The journal has an acceptance rate of about 50%. The journal is fully searchable by Google or other search engines.

The journal publishes on June 1st and December 1st. Submissions must be electronically submitted by March 15th for the summer publication and September 15th for the winter edition. This means it is possible for authors to have as little as a 2 1/2 month turnaround from submission to publication! More information can be found at: nacaa.com/journal.

The purpose of the journal is to give NACAA members the opportunity to publish in a peer reviewed journal and thereby advance their credentials. Because the Journal of the NACAA does not focus exclusively on research, it is an opportunity for county-based Agents to publish articles on innovative activities, case studies or emerging opportunities. Finally, the journal is an opportunity for first time authors to gain experience and confidence in publishing. As the editor, I am committed to helping any first time author successfully navigate the process.

Thanks to 2014/2015 Journal of the NACAA National Peer Reviewers

- | | |
|----------------------------------|-----------------------------------|
| Nicole Anderson – Oregon | Adele Harty – South Dakota |
| Dr. Sergio Arispe – Oregon | Michael Heimer – Texas |
| Cesar Asuaje – Florida | Steven Hines – Idaho |
| William Bamka – New Jersey | James Hoorman – Ohio |
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Mary Small – Colorado
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 Dr. Ann Swinker – Pennsylvania
 Dr. Stephen Van Vleet – Washington
 Richard VanVranken – New Jersey
 Todd Weinmann – North Dakota
 Michael Wheeler – Georgia
 Tim Wilson – Florida
 Jeff Wilson – Mississippi
 John Wilson – Nebraska
 Gary Zoubek - Nebraska

You can also find the top 50 most read articles for 2014 at: <http://www.joe.org/about-joe-website-statistics.php> they even go all the way back to 2005.

If you are interested in being a reviewer and have **breadth** across several areas as well as **depth** of expertise, please visit **JOE** FAQ # 14: <http://www.joe.org/about-faqs.php#Q14>

National Job Bank

Extension Journal Inc.'s other product is the National Job Bank <http://jobs.joe.org/>. The National Job Bank provides access to a broad range of faculty positions in teaching, research, extension and outreach along with other professional positions involving education, research and/or outreach missions.

The National Job Bank website allows the job seeker to post resumes and cover letters for potential employers to search through and find key individuals for positions they wish to fill.

Please take a few minutes visit **JOE** at: <http://www.joe.org> and National Job Bank <http://jobs.joe.org> websites. You never know what you might come across.

Extension Journal Inc. Keith Mickler, Georgia



Myriad of appreciation is extended to the NACAA officers and board for approving my continued mission of representing our association on the Extension Journal Inc. board. Currently I am serving as President for the Extension Journal Inc.

The Extension Journal Inc. offers two products to Extension, *The Journal of Extension (JOE)* and the National Job Bank.

Journal of Extension

JOE is a scholarly, double-blind, peer-reviewed online journal representing the best of Cooperative Extension from across the nation.

All **JOE** submissions are peer reviewed, with high editorial standards and scholarly rigor expected from all papers submitted and from the reviewers. Should your paper be published in **JOE** consider that a colossal achievement.

In 2014 there were 323 submissions, 22 submissions more than in 2013. 2014. Editorial Review Numbers are: 19% (61) rejected; 40% (129) returned for revision; 41% (133) accepted as suitable for review and/or publication.

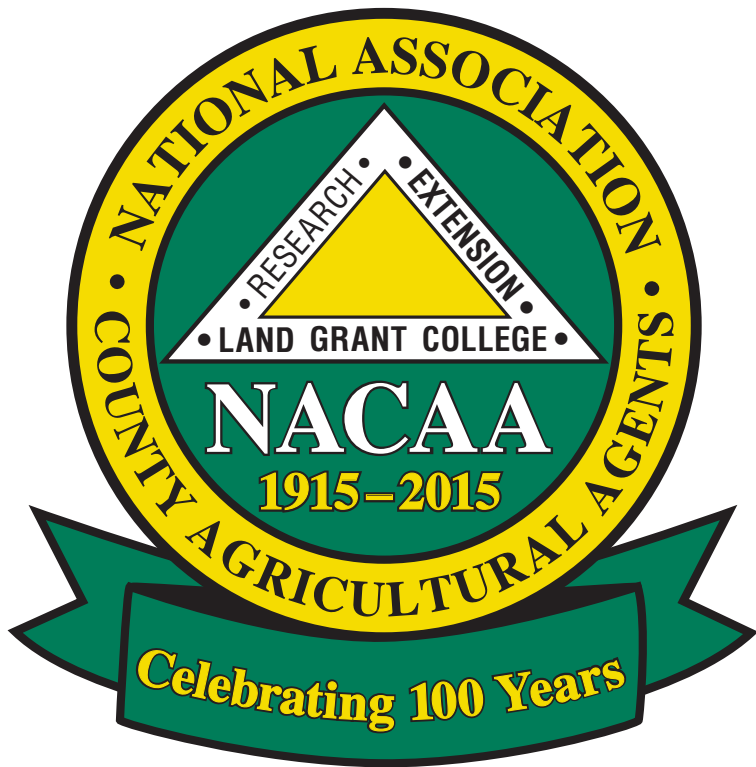
JOE currently has a 5-year publishing average of 20.2%. For more on the numbers, see the February 2015 Editor's Page, "**JOE** by the Numbers 2014" found at: <http://www.joe.org/joe/2015february/ed1.php>

Executive Director Scott Hawbaker, Illinois



It's been a pleasure to continue serving NACAA this past year as Executive Director. Working with NACAA's Leadership team, AM/PIC host state/region leadership, and NACAA donors is a rewarding experience that I am grateful for. I do my best to "hold down the fort" for NACAA, by assisting members on a daily basis, and spreading the good news about NACAA to potential new supporters.

Throughout the year, if you need assistance regarding NACAA, please don't hesitate to contact me at the office in Illinois at (217) 794-3700 or via email at nacaemail@aol.com



Poster Session

Applied Research

2015 NACAA

100th

Annual Meeting

and

Professional Improvement Conference

Sioux Falls, South Dakota

2014 NITROGEN RATE FOR OPTIMAL YIELD IN SOFT RED WINTER WHEAT

Lentz, E.M.¹

¹Educator, The Ohio State University Extension, Findlay, OH, 45840

Producers rely on university research to apply the proper rate of nitrogen for optimal wheat yields and to reduce the risk of nutrient loss into the environment. New wheat varieties may require more nitrogen. The objective of this study was to determine the nitrogen rate for optimal yields for soft red winter wheat in northwestern Ohio. Pioneer 2539 DT, a medium-maturity variety, was established in the fall of 2013 on the OARDC Northwest Research Station near Custar, Ohio. Field was moldboard plowed and leveled prior to planting. Eight N rate treatments were applied as urea-ammonium nitrate at greenup: 0, 40, 60, 80, 100, 120, 140, and 160 pounds per acre. All treatments received 30 pounds of N per acre prior to planting. Experimental design was a completely randomized block replicated four times. Analysis was a simple ANOVA. Grain yield, test weight, spike number, and N uptake (SPAD meter) were measured for each plot. Yields were 63.1, 87.0, 92.8, 94.4, 97.4, 98.2, 98.1, and 97.6 bushels per acre for the 0, 40, 60, 80, 100, 120, 140, and 160 N rate, respectively. Grain yield significantly increased, $p < 0.01$, with larger N rates until the 100 pound per acre N rate. Yields were similar for the treatments larger than 100 pounds per acre N rate. Results from this study would suggest minimal yield benefits above the 100 pound per acre N rate. An optimal N rate would exist between the 80 and 100 pound per acre N rate at this location.

AN EVALUATION OF TWO TYPES OF YELLOW STICKY TRAPS FOR MONITORING CORN ROOTWORM ADULT POPULATIONS IN FIRST-YEAR AND CONTINUOUS CORN PRODUCTION SYSTEMS AND SOYBEANS.

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Western corn rootworm (WCR), *Diabrotica virgifera virgifera*, is an important pest of corn (*Zea mays*) in the Corn Belt. Corn is a primary crop produced by farmers in Ohio, annually planted on 3.5-4.0 million acres. Corn rootworm has become increasingly more difficult to control through adaptations to various pest management strategies including crop rotation. Thus, it is imperative to regularly monitor its development and distribution. The objective of this study was to compare the effectiveness of yellow Pherocon AM/NB and yellow Scentry Multigard sticky traps for monitoring corn rootworm beetles (adults). From July to September of 2014, five corn fields and three soybean fields in Van Wert County, Ohio were monitored for corn rootworm beetle activity by using the two sticky trap types. Overall, the yellow Scentry Multigard sticky traps were found to be better for monitoring corn rootworm adults in this experiment, as they captured significantly more beetles than the yellow Pherocon AM/NB sticky traps (mean=1.5X

more beetles in first-year corn production, mean=2.0X more beetles in continuous corn production and mean=2.1X more beetles in soybeans) (t-test, $P < 0.05$). The maximum number of beetles captured in one week's time on a Multigard trap and a Pherocon trap was 560 and 260 respectively. Both traps exhibited some flaws in their production or storability. However, the effectiveness of the Scentry Multigard sticky trap to capture corn rootworm adults in both high and low density populations makes it a value tool for monitoring the western corn rootworm.

ARKANSAS DISCOVERY FARMS: IMPROVING IRRIGATION EFFICIENCY IN SOYBEANS WITH PIPE PLANNER DESIGN AND A SURGE VALVE.

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The State of Arkansas has declared parts of 13 counties in Eastern Arkansas "Critical Ground Water Decline Areas" due to large cones of depression in the underlying Mississippi alluvial aquifer. Furrow irrigation of soybeans with poly tubing as a delivery header is practiced on thousands of acres in Arkansas. Pipe Planner and PHAUCET are computer-assisted hole sizing programs that can improve furrow irrigation efficiency on average by 25%. It is thought that by integrating a surge valve into the design that irrigation efficiency can be further increased. A field trial was conducted by dividing a 100-acre soybean field in half to compare the use of a surge valve against a control. Tail water losses totaled 3.94 inches and 7.45 inches for the treatment (Surge Valve) and control, respectively. Irrigation efficiency was calculated for each irrigation event as tail water loss / irrigation amount. The mean efficiency was 0.22 and 0.43 for surge valve treatment and control, respectively. This indicates that the surge valve was 20% more efficient in reducing tail water losses. Nitrate-N losses were 0.25 and 0.46 lbs./Acre from the treatment and the control respectively while soluble P losses were 0.028 and 0.078 lbs./Acre, respectively. Results from this field trial indicated that the surge valve can increase irrigation efficiency (tail water loss / irrigation applied) by 20% while minimizing soluble nutrient losses in runoff.

ASSESSING HEAVY USE AREA PROTECTION ON POULTRY FARMS

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Poultry growers continue to work on improving their environmental footprint and one of the tools they use is Heavy Use Area Protection (HUA). HUAs are a Natural Resource Conservation Service (NRCS) approved practice code 561. The purposes and benefits include; reduction in the runoff of nutrients and other pollutants that impact water quality, prevention of soil erosion by providing a stable surface for livestock or equipment, and maintains and/or improves livestock management and health. HUAs are concrete pads that stabilize areas that can be disturbed by heavy equipment used during the production and rearing of poultry. These areas (typically, 148.6 m²) are located at the end doors of the poultry house, which receive heavy use during load out, clean out, and placement of the birds. Additionally, areas in front of the litter storage structures and mortality composting facilities are considered HUAs.

In order to determine the quantity of nutrients from the animal waste that are prevented from entering the local environment and water ways, all the litter left on the HUAs after loading out the birds was collected and weighed. A total of four different farms were used and the farms were visited multiple times during the year. An average of 0.328 kg/m² were recovered after each load out. The nutrient content of litter sampled was: 4.66% N and 3.85% P (dry basis). Therefore, in this study HUAs prevented 0.013 kg/m² of nitrogen and 0.01 kg/m² of phosphorus from entering the environment per load-out/clean-out.

BROOMSEDGE CONTROL IN PERENNIAL WARM-SEASON FORAGE GRASS STANDS

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Broomsedge (*Andropogon virginicus* L.) is a perennial warm-season grass weed species that infests permanent warm-season perennial grass pastures and hayfields throughout Louisiana. The objective of this study was to evaluate six options for control of broomsedge in perennial warm-season grass stands at three locations in Louisiana in 2014. Treatments included: control; lime plus fertilizer only; glyphosate applied at 1.5 pints/acre; clipping every 60 days; clipping every 30 days; and lime plus fertilizer plus clipping every 30 days. The lime plus fertilizer and glyphosate treatments were applied in late-March and clipping treatments were initiated on May 1. Broomsedge plant counts were taken in November at all locations using

2 ft x 2 ft quadrats. Five quadrats were taken per treatment. Statistical analysis was performed using the three locations as replications. The control treatment averaged 2 broomsedge plants/sq ft. Two of the treatments (glyphosate and lime plus fertilizer) did not significantly reduce broomsedge plant counts relative to the control (P=0.05). The treatment of clipping every 60 days also did not cause a significant reduction, but it did reduce broomsedge plant counts by 47% relative to the control. The treatment of clipping every 30 days and the combination treatment of lime plus fertilizer plus clipping every 30 days significantly reduced broomsedge plant counts by 66 and 73%, respectively, relative to the control. Results of this study suggest that a frequent clipping schedule of every 30 days is required to significantly reduce broomsedge plant populations in warm-season perennial pastures and hayfields.

BUCKHORN PLANTAIN IN HIGH MOUNTAIN PASTURES

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Buckhorn plantain (*Plantago lanceolata*) is a weed with increasing significance in Utah pastures and cropland. Buckhorn plantain competes for soil nutrients, water, and light and out-competes desirable plant species. Experiments were conducted during 2011 and 2012 on a 12 acre pasture in Wasatch County, Utah that was heavily infested with buckhorn plantain. Plot size for 2011 was 50' x 425' with three replications. Plots in 2012 were 10' x 30' with four replications. Each year the plot design was a randomized complete block. Density of buckhorn plantain was measured by randomly tossing a quarter square yard quadrat, ten times (2011) or three times (2012) in each plot, and completing weed density counts. Counts were repeated on 24 to 33 day intervals each year. Herbicide treatments were applied on May 4, 2011 and May 14, 2012. No significant symptoms were observed on pasture grasses in this study. Treatments with chlorsulfuron and metsulfuron caused some short-term chlorosis on grasses. Visual ratings and stand counts showed 2,4-D amine, and metsulfuron to be most effective in controlling buckhorn plantain in 2011. Control was 87 and 90% respectively 68 DAT. Metsulfuron (85%), and metsulfuron mixtures with 2,4-D (84%) or dicamba (82%) were most effective in 2012 evaluated 59 DAT. Further study should include herbicides from this trial and different seasonal application timings.

COMPARISON OF PLANT TISSUE TESTING AND HAND-HELD GREENSEEKER™ SENSOR FOR NITROGEN MANAGEMENT IN VIRGINIA WINTER WHEAT

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Whole plant tissue testing is the standard practice for nitrogen recommendations in intensively managed wheat. Previous research in Virginia has shown that variable rate nitrogen applications in wheat with Greenseeker™ sensors can maintain yields while lowering total nitrogen use per field. However, the variable rate technology costs about \$20,000 per applicator which is not cost effective for many individual growers. The hand-held Greenseeker™ unit has been advertised in the popular press recently for \$495 per unit. Wheat growers have expressed interest in this concept to reduce field sampling time, to obtain results instantly rather than waiting 3-5 days for laboratory reports, and to sample more fields at a lower cost. The objectives were to determine how many sampling points were needed per field and to evaluate nitrogen recommendations made by the tissue test and Greenseeker™ sensor algorithm. Twelve fields were selected by growers to install reference plots for Greenseeker™ calibration. At Zadoks growth stage 30, plant tissue samples were collected and Greenseeker™ readings were taken at 1, 10, or 50 points across the field. Results show that 10 or more data points are needed for accuracy. The Greenseeker™ nitrogen rates matched tissue testing 25% of the time. Approximately, 58% of nitrogen rates varied by more than 20 lbs per acre indicating that more work is needed to calibrate this system.

EFFECT OF FLORAL BUD AND FRUITLET THINNING ON “EMERALD” SOUTHERN Highbush BLUEBERRY

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Objectives: Southern highbush blueberry (SHB) *Vaccinium corymbosum* (hybrids) producers strive to harvest most of their crop in the first few weeks of the Florida “harvest window” to realize higher monetary return. Bloom and fruit thinning enhances yield in other deciduous crops such as peach and a trial determining if thinning treatments would enhance harvest of early fruit was established. Methods: The study was initiated in December 2013 in a 7 year old commercial planting of “Emerald” SHB to determine any effect on earliness and/or crop value associated with no thinning and thinning either tight floral buds (Stage II), full bloom or early fruit-set. A hand held “Cinch” bloom thinner was utilized to thin approximately 30% of Stage II buds, full bloom or early fruit-set. Harvest data consisting of average fruit weight per bush in was accomplished five times by a commercial harvest crew. Subsamples of 15 fruit per plot/harvest were measured for average diameter. Average USDA AMS FOB prices at each harvest were utilized for economic comparison. Results

were presented at the 2014 Florida State Horticultural Society Meeting. Results: Although there was no statistical difference in treatments for all harvests, trends indicated potential yield and revenue benefits from bud and bloom thinning. Conclusions: Further evaluations of this practice utilizing increased plot size are warranted. Growers have expressed interest in conducting trials on their farms.

EFFECT OF HEADLINE TREATMENTS ON TARGET SPOT IN COTTON

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Extended periods of wet weather and high humidity often occur during the cotton growing season in Georgia. These conditions, especially in cotton fields with a dense canopy, can lead to development and spread of leaf spot diseases, such as Target Spot. Target Spot is caused by the pathogen *Corynespora cassiicola* and can lead to premature defoliation and potentially reduce yield. An irrigated field study was conducted in two locations during the 2013 and one location in 2014 to determine the effect of Headline (pyraclostrobin) for the management of target spot. Treatments consisted of: season-long protection (where applications started at 1st bloom and repeated every 2 weeks), applications made at the 1st and 3rd weeks of bloom, and beginning a fungicide treatment after the initial presence of disease. All Headline applications were made at 4 oz/A. Treatments were replicated three times and plots were arranged in a randomized complete block design. A disease assessment of all plots was recorded as percent leaf defoliation, taken three weeks before harvest. Analysis of lint yield and disease severity revealed variable results. The 2014 trial revealed that fungicides may increase lint yield and overall plant health.

EFFICACY OF FUNGICIDES APPLIED AT THE COTYLEDON STAGE FOR MANAGEMENT OF DOWNY MILDEW ON KALE GROWN FOR SPRING-MIX PRODUCTION

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Due to its versatility and nutritional benefits, kale has risen in popularity among U.S. consumers. One popular form is baby leaf kale for use in spring-mix salads. A short-season crop, baby kale is planted at very high densities in rows spaced

at only 5 cm and the canopy fills in rapidly. This creates environmental conditions which are very conducive to downy mildew (DM), incited by *Hyaloperonospora parasitica*. A field trial was conducted to evaluate various fungicides applied at the cotyledon stage for their efficacy in controlling DM. The experiment consisted of a randomized complete block design with three replications of 12 treatments. Fluopicolide, mandipropamid, dimethomorph, cyazofamid, and potassium phosphite were each trialed at a single rate, while mefenoxam and oxathiapiprolin were each tested at three different rates. All treatments except the control received an application of potassium phosphite one week after the initial application. Disease was assessed by visually estimating the percentage of canopy displaying symptoms 25, 28 and 32 days after planting. Although disease pressure in the area was extreme, all fungicide treatments provided significant control, with mefenoxam, oxathiapiprolin, and mandipropamid providing the best results (no disease vs 37% severity in the untreated check by Day 28). However, by Day 32, all treatments displayed some disease, and rate effects were significant among the three rates of mefenoxam and oxathiapiprolin. Results demonstrate that preventative applications of efficacious fungicides can successfully manage DM under even extreme conditions, but that one or more subsequent fungicide applications are necessary for full season control.

EFFICACY OF FUNGICIDES APPLIED DURING LATE-DORMANT PHENOLOGY FOR CONTROL OF EXOBASIDIUM LEAF AND FRUIT SPOT OF BLUEBERRY IN GEORGIA

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Exobasidium leaf and fruit spot has been an infrequent and geographically dispersed disease of blueberries in the Southeast. However, during the 2011-2013 harvest seasons, we have had frequent reports of the disease in rabbiteye and southern highbush blueberries. Although scattered, where Exobasidium leaf and fruit spot occurs it can cause significant losses (60-70% in specific locations), primarily because

affected fruit are unmarketable and it is difficult to remove all berries with this symptom from the packing line; in addition, fruit drop occurs with some varieties. This on-farm study evaluated select fungicides for control of Exobasidium leaf and fruit spot on the rabbiteye blueberry cultivar 'Premier' in the South Georgia counties of Appling, Bacon, Clinch, Irwin, Jeff Davis, and Pierce. The treatments included lime sulfur, Sulforix®, and Captan®; all treatments were applied as a single late-dormant application with an airblast sprayer. The single late-dormant application of either lime sulfur or Sulforix® provided substantial and statistically equivalent management of Exobasidium, whereas Captan® was not effective. The epidemiology of Exobasidium maculosum has not been elucidated, but the high level of disease control afforded with both Sulforix® and lime sulfur may indicate that overwintering inoculum and/or early-season infections are of primary importance to disease development. The difference in efficacy between lime sulfur and Sulforix® was diminutive, but Sulforix® consistently outperformed lime sulfur with the exception of fruit spot incidence in Clinch County.

EVALUATING FULL SEASON SOYBEAN MATURITY GROUPS GROWN UNDER IRRIGATION

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The study was conducted to determine the optimum full season soybean (*Glycine max*) maturity group grown under irrigation in Maryland. In Maryland, full season (single crop) soybeans and double crop (after barley, wheat, or vegetables) are commonly grown on thousands of acres. There has never been research conducted to determine what maturity group to plant when. So, maturities were broken into 0.4 growth stages from 3s thru 5s in 2012 and group 2s added in 2013. Three varieties with 4 reps were used in each stage and yield averaged. Irrigation decisions were made based on tensiometer readings in the field. The goal was to keep the field moist all season, even though excess moisture early in the vegetative stage is not really beneficial. Some years rainfall encourages excessive growth which farmers cant prevent, so this experiment was conducted to simulate that. Plots were 7- 15 inch rows x 65 feet established and grown using commercial practices and harvested with a plot combine. After 2 years, the early group 3s yielded the highest.

EVALUATION OF FIRE BLIGHT TOLERANT ASIAN PEAR CULTIVARS FOR ALABAMA

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Asian pear trees are quite precocious and productive. Nine Asian pear cultivars namely 'Hosui', 'Isilwase', 'Kosui', 'Olympic', 'Shinko', 'Ya Li', 'Yoinashi', 'Atago', 'Shinsui', and

two European pear cultivars ‘Golden Russett’, and ‘Bartlett’, were planted at the Chilton Research and Extension Center near Clanton in the spring of 2010 to field-test currently available fire blight tolerant Asian pear cultivars for their adaptation to Alabama conditions. The experiment is part of a multi-state replicated trial set in eight locations across the eastern United States to assess Asian pear cultivars potential for growers focused on producing sustainable fruit crops for local and regional markets. Trees began flowering and fruiting in their second leaf and measurements of fruit quality began in the third leaf. Tree survival varied considerably among cultivars. By the end of the third season, ‘Bartlett’ cultivar had lost all 5 trees planted, and only 60% of ‘Golden Russett’ trees survived. All of the ‘Hosui’ trees were dead by the end of the fourth season. Cultivars ‘Ya Li’, ‘Isiiwase’, ‘Kosui’, ‘Olympic’, ‘Shinko’ and ‘Yonashi’ were vigorously growing. ‘Yonashi’ and ‘Shinsui’ were the most productive cultivars in 2014 based on their yield efficiency. ‘Yonashi’ produced the largest mean fruit size of 268.4 g. Our preliminary results indicate that selected Asian pear cultivars could be grown successfully on a small scale for local markets.

EVALUATION OF GOAT GRAZING PATTERNS IN A SILVOPASTURE SYSTEM

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Plants commonly considered weeds can be high quality forage and browse for some species of livestock. This browse and non-conventional grazing plants also can help reduce parasite pressure in goat herds increasing survivability and animal performance. Proper management of areas where these plants are common can reduce production cost and improve sustainability of small goat enterprises. Goats were placed on a small wooded pasture from May to September of 2013. The goats were weighed monthly and body condition score and eye color score were recorded. Four goats were fitted with Lotek 3300 GPS collars in June and removed in July during the regular weigh date. The collars were set to record GPS location, time and date, and temperature every 15 minutes. Animal data was evaluated for weight gain, change in body condition score, and eye color score. GPS data was analyzed using cluster analyses for movement through the pasture and the effects of ambient temperature for their impact on animal behavior. Animals were concentrated in one end of the pasture at first and then progressed to graze, over time through the remainder of the pasture. During the five months the goats maintained their body weight and had slight improvement in body condition score. Eye color scores were good through

the grazing period indicating low parasite levels through the summer months. At the start of the grazing period in May there was 10,407 kg/hectare of forage dry matter available for grazing. After grazing for five months all available forage was removed.

EVALUATION OF PROTHICONIZOLE FUNGICIDE ON PEANUTS IN EARLY CO.

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Peanut fungicides are the 2nd highest input a peanut producer has. Diseases are often times the most limiting factor on peanut yield in Early County and fungicides are constantly being evaluated with on-farm research for their efficacy on peanut diseases. Prothioconazole (Proline) is one of the products claiming to offer the producer the added benefit of better disease control and higher return on investment. Multiyear studies have been conducted on Prothioconazole both in-furrow and Early Post emergence. In-furrow applications were used to evaluate Prothioconazole’s activity on *Cylindrocladium* Black Rot (CBR) and the early post emergence applications its efficacy on general disease control. Two on farm replicated trials have been conducted on in-furrow applications of Prothioconazole. In both trials the addition of Prothioconazole gave an increase in yield with or without the presence of CBR. It also lowered the incidence of CBR. A yield increase of 268 pounds per acre was achieved in the presence of CBR and 403 pounds in its absence. Three early post emergence trials have been evaluated. Prothioconazole was applied at 28 days after planting followed by a 4 block Provost program in the three trials Prothioconazole was the highest yielding program with an average yield increase of 733 pounds per acre. Other data collected from these trials include the incidence of White mold and CBR. Prothioconazole has also shown on average a return on investment of \$101.00 per acre. These on farm research trials give producers valuable information they can use to make informed decisions.

FEED QUALITY AND ENSILING CHARACTERISTICS OF CORN SILAGE WITH OR WITHOUT SOYBEAN INTERCROPPING

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Dairy producers rely on corn silage in TMR's. Enhancing quality of silages through intercropping of soybean was explored to determine if silage quality, fermentation characteristics, and animal performance measures would be impacted. Silage corn (TMF2Q308, Mycogen Seeds®) was seeded as a monoculture or intercropped with low, medium, and high seeding rates of two soybean cultivars (Asgrow® 1431, Monsanto; and GameKeeper™, Eagle Seed). Upon harvest, samples were inoculated with lactic acid producing bacteria and ensiled for 90 days. Pre- and post-ensiled forage quality was analyzed by NIRS, wet chemistry, and ICP. Fermentation analysis determined pH, NH₃, total, lactic and individual VFA. In addition, DM and NDF disappearances were quantified by in situ degradation techniques at 24 and 48 hours to estimate rumen degradability. Forage quality and minerals were influenced by the ensiling process. Starch concentrations averaged over cultivars and years were 15.9% in pre- and 13.8% in post-ensiled forage, where bacterial respiration may be a reason for the reduction in starch concentration. Soybean monoculture showed the lowest starch concentration (0.6-5.8%). The DM recovery was high throughout the treatments (92.8%). Ammonia production ranged from 0.36 to 3.10%, with the high end of the range in soybean monoculture (2.01%). Lactic acid production was in the range of 1.9-6.1%, where soybean monoculture, corn monoculture, and intercropping of the two crops were 5.8%, 3.3%, and 3.6%, respectively. The pH averaged 4.1. The DMD, NDFD, and DNDF were influenced by hours and ensiling.

FOOD SYSTEMS REVIEW: FRUITS & VEGETABLES IN SOUTH DAKOTA

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Insufficient intake of fruits and vegetables (F&V) is recognized as a contributor to rising chronic health issues and medical costs. In 2009, South Dakota (SD) was ranked last nationally for vegetable consumption by the Behavioral Risk Factor Surveillance System (BRFSS) survey. In 2013, BRFSS listed SD as one of five states (along with North Dakota, Iowa, Louisiana and Mississippi) with daily adult vegetable intakes below 1.4 times/day. SD adults' median fruit intake was 1.0/day.

This 'Food Systems Review' summarizes interrelated factors of three independent Producer, Grocer and Consumer surveys used to determine reasons for South Dakotans low consumption and identify opportunities to increase consumption of F&V. Data sets from consumer surveys were sorted into "food desert" and "non-food desert" areas (USDA, ERS).

Respondents from all surveys indicated an increase in F&V production, sales and consumption over previous three years. Conflicting opinions were found on how to increase grocer sales; grocers preferred in-store samples, displays & quick and easy recipes while consumers preferred coupons. Grocers felt consumers are easily swayed by low cost convenience foods

and were not assured they had in-depth knowledge of the role F&V play in the prevention of chronic disease. Consumers did not think food quality, price or household income were reasons to prevent them from eating more F&V, though a lack of time and knowledge or capability to prepare and preserve is a problem.

Data gleaned from the study is being utilized to support and guide programming to increase production and consumption of F&V in SD.

IMPROVING TALL FESCUE PRODUCTION USING LEGUMES AND NITROGEN APPLICATION TIMING

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Northwest Missouri tall fescue pastures typically lack legumes, therefore spring application of nitrogen fertilizer is used to increase forage production. The lack of legumes is caused by herbicides, over-grazing and nitrogen fertilizer application during legume establishment. Nitrogen fertilizer is generally applied in spring and not used to fall stockpile tall fescue. To address these issues, experimental plots were established using a randomized complete block design with four replications located at the Hundley-Whaley Research Center located at Albany, Missouri. Seven legume treatments of red clover, birds-foot trefoil, alfalfa, two varieties of white clover, alsike and lespedeza and seven treatments of nitrogen application timing with and without red clover were also established. The study was conducted from 2008 through 2013 and the means of the six years of data are reported. Three applications of 60 pounds of nitrogen produced the highest tonnage with 4.84 tons. This was followed by birds-foot trefoil and alfalfa with 4.82 and 4.67 tons respectively. The tall fescue check yielded 2.67 tons. The typical management practice of 60 pounds of nitrogen applied in March yielded 3.48 tons with only the check and lespedeza treatment yielded lower. Adequate fall rainfall benefited stockpiling fescue along with red clover growth. Alfalfa and birds-foot trefoil provided yield benefit during droughty summers. Spring application of nitrogen fertilizer stimulated tall fescue growth which reduced the establishment of red clover.

IMPROVING UREA UTILIZATION FOR STOCKPILING FESCUE

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Stockpiling fescue with urea fertilizer to extend the grazing season is a viable option for many producers. The addition of 100 lbs./acre of urea (46 lbs. nitrogen) can increase yield and crude protein. One problem with this practice is the possibility of not having an adequate rainfall with 48 hrs. and the volatilization of the urea. The addition of urease inhibitors such as Agrotain® can reduce volatilization. In a 2014 replicated study, urea (46 lb./acre) with Agrotain® (four qts./acre) was compared with urea only (46 lb./acre) and no treatment (control). There was 0.59 in. rain within 72 hours which reduced the volatilization of the urea. Results indicated a trend toward higher yields with the treatments; significant increases ($P<0.05$) in crude protein with the treatment; and no significant differences in ADF ($P<0.05$) with the treatments. If there is concern about adequate rainfall when applying urea, a urease inhibitor may be a good option. The closer an adequate rain event occurs to the application of urea, the less likely the need will be for the addition of a urease inhibitor.

IN SEARCH OF THE PERFECT STEAK

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American beef is high quality, but tenderness is a concern. The current focused paradigm of beef quality grading is fat and hair color. The purposes of this ten year project were 1) determine if existing DNA technology could be used at the herd level to rank and select breeding cattle for tenderness and if so 2) scientifically confirm the ability of DNA marker technology, for the 18th chromosome to select for tenderness. The tenderness scale is T-1 to T-10 with T-10 being highest tenderness. Normal American beef ranks T-3 to T-4. While DNA tenderness technology is available, little research existed on inheritance, specificity and accuracy. Using DNA marker technology, I researched bulls and selected semen with high ranking DNA tenderness (T-9, T-10). Heifers were DNA tested and those with high rankings were artificially inseminated. Working with cooperating producers, 350 cows were part of the project. Over several generations, we discovered high tenderness ranking to be infrequent and inherited. Feeder cattle (N=28) were raised on irrigated pasture until 900 pounds, commercially finished and harvested. Identical samples were tested for tenderness using a Warner Bratzler shear force machine. Results showed significant difference (<0.01) in tenderness between normal beef (T-3, 4) and selected tender (T-8, 9, 10) beef. The project showed guaranteed beef tenderness is an inherited trait. The technology is specific, accurate, cost effective and makes a significant difference in beef quality. DNA marker use enhanced beef quality and

guaranteed tenderness independent of breed, method of finish or fat in the carcass.

INCREASING FORAGE YIELD WITH SURFACTANTS

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Schaeffer Manufacturing Co, 102 Barton St. Louis, MO 63104 markets surfactants. The researchers were asked by Schaeffer Manufacturing to investigate two products used in conjunction: Wet-Sol® and Wet-Sol Gro®, biodegradable non-toxic surfactants. Company representatives were interested to see if these products would show any impact on forage quality, soil compaction or forage yield. Surfactants are currently being utilized in the agricultural spray industry to enhance the performance of agricultural pesticides. No studies have been conducted with these products on fescue meadows, evaluating the above mentioned variables. Ten plots were established utilizing random block design on Kentucky 31 fescue, *Festuca arundinacea*. Five control plots and five treatment plots were evaluated at the OSU Eastern Agricultural Research Station in Belle Valley, Ohio Forage was analyzed for N%, P%, K%, Ca%, Mg% and DM yield for all treatment and control groups. Schaeffer representatives collected blind soil compaction data blind. Representatives had no way of knowing if the plots were the treatment or control. Our conclusion: There were no significant differences for these plots at a $P=.05$ for any of the variables evaluated

INTERCROPPING IRRIGATED CORN WITH SOYBEAN TO INCREASE BIODIVERSITY AND PROTEIN CONTENT OF SILAGE

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Dairy producers in the Columbia Basin normally grow corn planted in June, followed by winter triticale planted in October every year and contain no broadleaf crops, increasing likelihood of increased pest pressures over time. An experiment was conducted at the Irrigated Research and Extension Center near Prosser, WA. The hypothesis was that soybean, a broadleaf crop, would increase biodiversity, protein production per acre, and total production per acre of irrigated silage if intercropped with corn at the correct population. To test this hypothesis two maturity groups of soybeans (one and seven) were

planted in six inch rows perpendicular to the corn rows at four different planting rates (0, 38,000, 76,000 and 152,000 seeds/acre). The corn was planted in 30" rows at 38,000 plants/acre both years and fertilized according to soil test for corn silage.

Intercropping corn with soybeans increased total silage produced, except with the maturity group one soybean in 2012. The optimum treatment was intercropping corn with a maturity group seven soybean at 76,000 plants/acre, with soybean dry matter comprising 5.2% and 10.4% of the total silage. Total dry matter production increased 0.77 tons/acre and 1.69 tons/acre in 2012 and 2013, respectively. Protein content of intercropped silage was 0.12% higher in 2012 and 0.78% higher in 2013. In 2013, protein production was increased from 0.69 to 0.86 tons/acre, a 19% increase. Intercropping irrigated corn with maturity group 7 soybean at 76,000 seeds/acre would increase biodiversity, yield, and protein yield for irrigated silage growers in the Columbia Basin for dairies.

IRON SOIL PHOSPHORUS RELEASE MAY IMPACT HARMFUL ALGAE BLOOMS AND WATER QUALITY

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Phosphorus (P) speciation shows how P is tied up in mineral (inorganic) or carbon (organic) forms. Soil was collected from seven sites (low-high Bray P1, grass, forest) on two Ohio soils (Blount, Pewamo) in the Grand Lake St. Marys, Ohio Watershed. Samples were separated by <50, 50-100, 100-200, 200-300, 300+ pounds Bray P1/acre and split by depth (0-1, 1-3, 3-6, 6-9, and 9-12 inches). P tests included soluble reactive P (SRP), calcium P (CaP), iron P (FeP), residual organic P (ResP), and total phosphorus (TP). Statistical analysis showed that the P level distribution was different than predicted ($P < 0.0001$) for SRP, FeP, ResP, and TP. By soil type, the means were significantly different for FeP ($P < .0062$), ResP ($P < .0001$), and TP ($P < .0001$). Forested and grass sites had medium Bray P1 values but higher stable humus (ResP) and the lowest iron (FeP). The FeP mean values were highest on the cropland sites and lowest on the grass and forested sites. As cropland loses organic matter and P soil tests increase, more of the SRP is tied up by the mineral portion, especially FeP. The ratio of stable humus (ResP) to unstable (FeP) was highest on forested (9.5, 12.7) and grass (7.2, 8.6) compared to cropland with high P levels (1.7-1.9, 1.3-1.8) on Pewamo and Blount soils, respectively. Under saturated soil conditions, P tied up as FeP

is unstable (Fe³⁺ converts to Fe²⁺) and releases SRP which is subject to increased P runoff and may contribute to harmful algae blooms in many lakes.

LAND LEASE SURVEYS FOR LOCAL EXTENSION UNITS

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According to the 2012 Census of Agriculture, 50.8% of all ag land in Kansas is operated on a leased basis. Given the capital intensive nature of agriculture today, the increasing number of absentee land owners, the fluctuation in agricultural markets, and the competition to acquire land for leasing, it is important for producers and landowners to make informed decisions based upon sound economic principals and reliable information.

Sources for leasing information are fairly limited for area producers. Landowners and tenants frequently turn to K-State Research and Extension offices for information on the "going rates" of pasture and cropland leases. Several local K-State Research and Extension districts have recognized the value of local rental rate information to have available for their clients and began conducting annual lease surveys.

Each district has developed publications that are a compilation from the local surveys returned and do not represent a random, scientific survey. The objective of this project is to provide local data for all landowners and tenants of the respective districts and to educate them on the different types of leases and equitable leasing arrangements through the resulting publications and lease meetings.

MEASURING SOIL HEALTH IN ALABAMA

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Almost 200 years of cropping and abuse have left many soils in the State of Alabama (USA) in poor condition with generally low quality and low productivity. A 2001 survey of Central Alabama cotton fields indicated that 55% of fields had soil organic matter less than 0.4% and 63% had root restricting

compaction within 30 cm of the surface. Eighty-five percent of the producers were not using a cover crop which exposed the bare soil to erosion for 6 months during the year. On the other hand, most were soil testing and doing an outstanding job of liming and fertilizing based on soil test results. Data from Alabama's long-term "Old Rotation" experiment (circa 1896) show a significant correlation between soil organic C and crop yield potential. Because many soil quality/soil health parameters can be measured in an existing public soil testing laboratory, we have proposed to incorporate these tests into a "Soil Quality Index" (SQI) value that producers can use to evaluate their soil health. Best management practices will be recommended to help producers improve their SQI value. A draft of this index based on a scale of 0 to 100 is presented.

MULTI-YEAR (2008-2013) RESEARCH OF IN-FURROW AND TOPICAL AZOXYSTROBIN AND PROTHIOCONAZOLE TREATMENTS ON SEVERITY OF CYLINDROCLADIUM BLACK ROT AND WHITE MOLD DISEASES OF PEANUT

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The impact of soilborne diseases on peanut production in Effingham County has been a problem that needed to be addressed with additional on-farm research. Peanut acreage has increased in the county over the past several years and the problems associated with peanut production have become more widespread, due in part to shorter rotations between peanut crops. In multi-year (2008-2013) on-farm research demonstrations, the effectiveness of prothioconazole (Proline) applied in-furrow at planting and over-the-top after emergence was evaluated for the management of peanut diseases. Provost (prothioconazole + tebuconazole) and Artisan (flutolanil + propiconazole)/chlorothalonil were evaluated with Proline (prothioconazole) and Abound (azoxystrobin) to assess the best program for overall disease protection. Data collected in these studies included severity of leaf spot diseases, white mold, and *Cylindrocladium* black rot. As in-furrow fungicides with known activity against *Cylindrocladium* black rot and over-the-top activity against white mold may also improve seedling health as well, it was hoped that these practices would not only improve control of CBR and white mold, but possibly seedling disease and TSWV as well. The use of prothioconazole and azoxystrobin was a relatively new practice for our peanut growers when this research demonstration was initiated in 2009 and there was a lack of data on this type of application in the southeast on large-plot, on-farm trials. The data exhibits the effectiveness of prothioconazole and azoxystrobin on improving control of CBR and white mold soilborne diseases that negatively impact yield and quality.

NITROGEN CONCENTRATION IN RICE FLOODWATER FOLLOWING FERTILIZATION APPLICATION

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Agriculture is considered to be a leading source of nutrients delivered to the Gulf of Mexico and thus contributing to the hypoxia issue. Arkansas is the leading rice-producing state in the nation. Besides the environmental concerns, rice farmers are looking for ways to be more efficient in nutrient applications due to high fertilizer prices. In Arkansas, nitrogen is typically applied in split applications with the first application before first flood and a second mid-season application where the nitrogen is directly applied to flooded fields using aerial application. Previous plot-scale studies have shown that nitrogen concentrations in flooded rice fields can dissipate in a matter of days. The purpose of this study was to determine changes in nitrogen concentration in rice floodwater following fertilizer applications on a commercial rice field. To determine how the concentration of nitrogen in rice floodwater changes and how long it takes it to move into the soil, water samples were collected using Sigma 900 automated water samplers located in three different rice bays within a private, commercial rice field. Samples were collected initially at 1 hour intervals and decreased to once a day from day five to fourteen. Samples were processed in the field and shipped to the Arkansas Water Resources Center lab for analysis. The results indicate that rice fields act as a wetland and nitrogen concentration in the floodwater decreases rapidly and after a few days and the concentration is less than two thirds of most streams in agricultural watersheds in the United States.

OCTOBER 2013 BLIZZARD IN WESTERN SOUTH DAKOTA: A CLIMATE PERSPECTIVE

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An early season blizzard on 4-5 October 2013 in western

South Dakota and neighboring areas of Wyoming, Nebraska, and North Dakota caused severe infrastructure damage and economic losses to businesses and agricultural communities. Estimated losses total \$38 million in SD alone, including approximately 45,000 livestock (cattle, sheep, horses, and bison) that perished in the storm.

A study was conducted to ascertain the climatological rarity of such early fall blizzards, and to determine if there is any attribution to anthropogenic (human-induced) climate change. A climatological study determined that the total precipitable water (atmospheric moisture) of the storm was almost 4 standard deviations above average for Rapid City. The total snowfall ranked as about a one in ten year event for any time of year, which is not exceptionally rare, but the timing was unusually early. Other results show:

- Increased early autumn precipitable water of ~ 5-10% consistent with observations.
- No attributable link between anthropogenic climate change and heavier precipitation/snowfall in early autumn for western South Dakota.
- More broadly, increased temperature and hot extremes across the continent and decreased snowfall (but not extremes) in the western US does appear partially attributable to anthropogenic forcing.

OYSTER RESERVE ESTABLISHMENT IN MISSISSIPPI SOUND (AL)

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We established the first oyster (*Crassostrea virginica*) reserve (10 acres) within Alabama (Portersville Bay). The project objective was to establish and maintain a productive oyster reserve that can serve as a regional source of larvae and improve coastal habitat. The site continues as an ongoing research and education platform for evaluating the spawning, recruitment, survival and growth of the American oyster.

Within the 10 acre site, oyster harvests were eliminated, and an area of 2,500 m² was cultched with dried, aged oyster shell. Cultching improves larval settlement and recruitment success within the reserve allowing evaluation of spawning, recruitment, survival and growth of oysters planted within the cultched area (cultched + planted). Spawning stock 'beds' were established (36/m²) from the advanced stocker oysters (mean shell height = 55.9mm) produced by the all-volunteer Mobile Bay Oyster Gardening Program.

Spat recruitment was documented from significant declining mean shell height ($p=0.0027$) among sampling dates (April, July and October 2013) and strongly significant mean shell height ($p=0.0000067$) between samplings of both cultched only and cultched + plantings April and October 2013.

Creation of dense spawning beds was complicated by heavy predator (oyster drill) presence. Significant population decline on the cultched + planted zone was noted April to October ($p=0.008$). The cultch only zone showed significant population decline over the same time period ($p=0.013$). This predation, widely seen within the region, prompted the next phase of the investigation to include an evaluation of protective measures for dense spawning aggregates with the reserve.

POULTRY LITTER OR COMMERCIAL NITROGEN FERTILIZER- WHICH ONE PROVIDES THE HIGHEST NET RETURN IN A WHEAT/SOYBEAN DOUBLE-CROP PRODUCTION SYSTEM?

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Alabama farmers commonly use poultry litter pre-plant to fertilize wheat in a wheat/soybean double crop production system. Information was lacking about the net economic returns of double cropping with litter in comparison to commercial nitrogen (N) fertilizer or a combination of the two. The objective of this 2009-2014 study was to ascertain which fertility program provided farmers with the best results. The study was conducted in north Alabama on non-irrigated plots with initially high to very high levels of P and K sufficient for maximum yields. The 5 wheat fertilizer treatments were as follows: (1) 2 tons litter/Ac pre-plant {L} (2). 2 tons litter/Ac pre-plant + 1.5 tons litter/Ac topdress {LL} (3). 20 lbs. commercial N/Ac pre-plant + 80 lbs. commercial N/Ac topdress [C] (4). 2 tons litter/Ac pre-plant + 40-50 lbs. commercial N/Ac topdress {LC} (5). 100 lbs. commercial N/Ac pre-plant as a N rich strip {NRS}. Treatments were applied to the same plots for 3 consecutive years and then plots were relocated to another field for the fourth and fifth years. No wheat yields were obtained in 2010 due to poor stands caused by cold weather and Hessian fly confounded wheat yield results in 2012. Drought significantly reduced soybean yields in 2010. Average net receipts (crop values-fertilizer costs) over 5 years were similar for all treatments (range = \$685 to \$702/acre). However the litter treatments provided farmers with additional P and K valued at \$471/acre in the L and LC treatments and \$769/acre in the LL treatment.

SMUTGRASS CONTROL IN PERMANENT PASTURES USING CHEMICAL AND CULTURAL METHODS

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Smutgrass (*Sporobolus indicus*) is a perennial warm-season grass weed species that infests permanent warm-season perennial grass pastures throughout Louisiana. The objective of this two-year study was to evaluate three herbicide treatments and one aeration treatment for control of smutgrass and amount of injury incurred by the perennial warm-season forage grasses present. Herbicide treatments included Velpar applied at 3 pints/acre; Glyphosate applied at 1.5 pints/acre and Glyphosate applied via a wick-bar applicator at a ratio of 30% Glyphosate: 70% water. The aeration treatment was conducted using an AerWay implement set to provide tillage to the sod at a depth of about 3 inches. Treatments were applied at two different field locations on 31 May and 24 June of 2013 and 2014, respectively. Visual smutgrass control and grass injury ratings were taken about 30 days post treatment and final ratings were taken in October. In both years of the study, the Velpar treatment provided the most consistent smutgrass control (73-98%). In both years injury to the sod was minimal for the Velpar and aeration treatments, while Glyphosate herbicide broadcast at 1.5 pints/acre caused the most sod damage (20-78%). The aeration treatment provided poor smutgrass control in both years. Glyphosate applied via the wick bar provided good smutgrass control in both years, but did cause severe damage to the sod (70%) in one year of the study. Results suggest that the Velpar herbicide treatment provided the most consistent control of smutgrass while causing negligible injury to the desirable forage grasses present.

SOIL SURVEY TO IDENTIFY STRATIFICATION DEGRADATION

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The Inland Pacific Northwest soils have been considered some of the richest soils of the world. Recently, soil quality concerns have developed, as there are reports of severely reduced soil pH levels (< 4.0 pH) in the uppermost 12" of the soil profile and cases of total production loss in some fields. It has been assumed that these are isolated cases and attributed to soils of high rainfall, formerly forested, or no-till soils and not representative of the general region. Following some previous intense and precise soil sampling in Columbia County Washington, results indicate that the problem may be more general than anticipated. The local Conservation District provided financial means to do an extensive soil sampling survey to test the hypothesis. A 2-year soil-sampling project identifying 76 production and non-farmed sites covering more than 150,000 acres was adopted. Locations were distributed across the county landscape so that all rainfall zones (12-16, 16-20, and > 20 inches) were represented as well as soil types and cropping systems. Soil samples were collected at stratified levels (0-3, 3-6, 6-12, and 12-24 inch layers). Each sample layer was analyzed for soil pH, available nutrients including aluminum.

Results across all landscape and rainfall zones indicate 97% all fields with < 6.0 soil pH and 89% < 5.2 pH in the top 6 inches of soil profile and with high available aluminum exceeding 300 ppm compared to the native sites with pH values of 6.3 to 6.9.

THE EFFECTS OF LOW STRESS CATTLE HANDLING AND WEANING TRAINING ON POST-WEANING WEIGHT GAIN AND CALF ACTIVITY

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The objective of this study was to assess the effect of low stress handling of Angus cross beef cattle on stress, measured by weight gain and calf activity, associated with the weaning process in the cow/calf operation in Virginia. There was a difference at a p-value of 0.0001 between handling method for weight gain in calves at one week and one month post-weaning. One week post-weaning the low stress calves outgained the conventionally handled calves by 12 lbs. One month post-weaning the low stress calves outgained the conventionally handled calves by 20 lbs. Pedometers were used to assess calf activity in steps per hour post-weaning. The low stress calves expended less energy by taking 600 to 1000 less steps per hour for the first three days. Handling cattle using low stress techniques can result in lower stress, increased gain, increased profit, and has potential to increase other areas of production in beef cattle.

THE EFFECTS OF PRE-EMERGENCE AND POST-EMERGENCE HERBICIDES ON SOYBEANS

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Due to grower concerns, two field trials were initiated to investigate the response of soybeans (*Glycine max*) to seven pre-emergence herbicides and two common post emergence herbicides. Growers felt that these herbicides were reducing yields due to plant stunting and leaf burn. Growers also wanted to know if using crop oil concentrates (COC) or methylated seed oils (MSO) in combination with the post emergence herbicides were reducing yields and if so, which one was worse. Data to answer these questions was limited. Commonly used pre-emergence herbicides in area are Prefix, Valor, Envive, Dual Magnum, Authority, Boundary, and Fierce. The most used post emergence products are Flexstar GT, Powermax, and Harmony. Syngenta 74-M3. A metribuzin tolerant soybean was planted on 7/7/2014, and pre-emergence applications were made the same day at 10 gallons/A mixed with 4 pints/A of Gramoxone. Stand counts indicated no significant differences in all of the labeled treatments. Valor SX + Dual Magnum and Envive +Dual Magnum showed a significant effect on plant growth based on tri-foliolate counts. Authority MTZ, Boundary, and Envive showed a numerical effect. However, yield data showed no significant differences compared to the untreated check. For the post emergence trial, 74-M3 soybeans were planted on 7/7/14. Each plot received a pre-emergence application for weed control. Post emergence applications were made on 8/15/14 at a volume of 20 gallons/A. MSO treatments showed more injury than COC's in all combinations. No significant yield differences with any of the treatments compared to the untreated control and weed-free check.

THE PRODUCTION OF MYCOTOXINS BY FUNGI ISOLATED FROM MAPLE SYRUP

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Maple syrup processors occasionally find syrup contaminated with fungal growth and the conventional practice is to skim off the mold, re-boil and consume the syrup. Researchers at the University of Maine have identified 73 fungal isolates collected from 38 containers of US maple syrup. The most common genera are *Penicillium*, *Aspergillus* and *Wallemia*; a limited number of *Cladosporium* and *Paecilomyces*; and various ascomycetous yeasts. Some *Aspergillus* and *Penicillium* are known to have the ability to produce mycotoxins. The most common species of *Penicillium* isolated was *P. brevicompactum*,

which is known to produce mycophenolic acid (MPA). Three genetically distinct strains of *P. brevicompactum*, isolated from contaminated maple syrup samples, were found to produce up to 1 mg/ml of mycophenolic acid when grown in a medium optimized for MPA production. The question is whether *P. brevicompactum* produces MPA at a level that presents a risk for human health when grown in maple syrup.

USE OF BENEFICIAL BACTERIA TO TREAT NUTRIENTS IN POND WATER

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Agriculture and urban ponds often suffer impaired water quality from high levels of nitrogen and/or phosphorous that typically triggers excessive "blooms" of algae or cyanobacteria. Bacteria are known to breakdown nitrogen and phosphorous and ammonia in controlled wastewater treatment plant processes. Based on this information, commercial enterprises market beneficial bacteria products scaled for application to reduce nutrient levels in eutrophic ponds. This project tested a beneficial bacteria product to determine its effectiveness to reduce high phosphorous levels in a controlled pond water experiment. The bacteria in the tested product were: *2-Bacillus subtilis*, *2-Bacillus amyloliquefaciens*, *B. pumilis*, *B. licheniformis*, and *B. megatarium*. We compared three treatments of pond water, versus three treatments of pond water with beneficial bacteria added. All treatment water was filtered to 5µ. All treatments were supplied with air to keep the water aerated, mixed, and to encourage microbiological activity. Samples were collected weekly for three weeks. A second set of treatments was also compared, but no supplemental air was added. Sample parameters included DO, temp., pH, conductivity, and orthophosphate (soluble phosphorous). The orthophosphorous values were analyzed using a LaMotte Smart3 Colorimeter. All the 190 liter treatment containers were maintained at ambient pond water temperature and light conditions by floating them in the pond. A raw pond water sample was collected each week and compared to the treatments. Results showed no significant difference in orthophosphorous reduction across all treatments with the addition of the beneficial bacteria.

VALUE OF A SWEEP APPLICATION IN NO-TILL FALLOW

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Farmers across the intermediate (300-450 mm annual

precipitation) cropping region of Eastern Washington traditionally use a tillage based summer fallow-winter wheat (*Triticum aestivum* L.) system. By adopting conservation tillage, farmers have increased implementation of no-till summer fallow (chemical fallow) systems to reduce erosion and increase profitability; however they have expressed concerns regarding adequate seed zone soil moisture and consistent control of tough weeds. The main objectives with this research project was to examine the value of a one-time “sweep” cultivation to improve seed zone moisture and kill weeds that can be troublesome with a cost effective herbicide application compared to a true no-till fallow system. An on-farm trial (OFT) established over four years examined the impact of a single “sweep” cultivator operation in fallow on seed zone soil moisture, yield, grain quality and economic returns. Weed data was not collected but visual observations were made. The treatments were no-till fallow (NTF) and a sweep operation replacing the second of three herbicide applications in the no-till fallow system. The OFT was a randomized complete block design with four replications. The sweep operation did not significantly increase seed zone moisture, grain yield, test weight, or economic returns. Grain protein was less following the sweep application, averaging 9.4% compared to 9.8% in the NTF. The sweep treatment, as anticipated, was an adequate weed control operation. In conclusion the sweep operation did not increase seed zone moisture, but was effective removing weeds that can be difficult to control with a cost effective herbicide application.

The treatment yield averages were: Control 73bu/A, Base rate 148 bu/A, MRTN 231bu/A, MRTN minus 208 bu/A, MRTN plus 235 bu/A, Optical sensor 198. The experiment confirmed the MRTN rate produced the optimum yield. The optical sensor underestimated the nitrogen requirement and savings on nitrogen fertilizer were not enough to compensate for a 33 bushel loss of yield.

VARIABLE RATE NITROGEN TECHNOLOGY PLOT

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Nitrogen fertilizer is one of the single highest input costs for corn production. Field nitrogen losses are also one of the biggest water quality concerns in the Corn Belt and directly impacts the hypoxia zone in the Gulf of Mexico. The University of Illinois recommends farmers use the Maximum Return to Nitrogen (MRTN) approach to selecting the optimum nitrogen fertilizer rate for their corn. In 2014, the authors conducted a nitrogen rate and technology plot on the University of Illinois Crop Science and Research Center Farm. The experiment included four replications of six treatments: a zero rate, a base rate of 60 lbs., an MRTN rate of 180 lbs., an MRTN minus rate of 120 lbs., an MRTN plus rate of 180 lbs., and rate determined by an optical sensor equipped applicator (Greenseeker). All treatments except the zero-rate control received a base rate of 60 pounds of nitrogen in the form of 28% UAN applied pre-plant. The remaining applications were applied at V6. Plots were tissue tested at pollination. Visible light and near infra-red aerial imagery of the plots was collected throughout the season with unmanned aerial vehicles.

Poster Session

Extension Education

2015 NACAA
100th
Annual Meeting
and
Professional Improvement Conference

Sioux Falls, South Dakota

4-H AND F.I.R.S.T. PARTNERSHIP: SYNERGISTIC OPPORTUNITIES SCIENCE EDUCATION

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America faces a future of intense global competition with a shortage of scientists. Only 18% of U.S. high school seniors are proficient in science (NAEP 2005) and five percent of current U.S. college graduates earn science, engineering or technology degrees compared to 66 percent in Japan and 59 percent in China.

To address the national shortage of teens pursuing science majors and careers, 4-H has formed a partnership with *F.I.R.S.T.* (*For Inspiration and Recognition of Science and Technology*), to get youth excited about science and engineering careers through robotics. In this project youth are engaged in designing, building and programming a robot to perform specific tasks for regional and state competitions. Youth are paired with mentors who are engineering, graphics and business professionals. High school aged youth participate in *F.I.R.S.T.* Robotics Competition (FRC) or *F.I.R.S.T.* Tech Challenge (FTC). Younger youth participate in FIRST Lego League (FLL) using an EV3 Lego Mindstorm robot. To prime the STEM pipeline, youth 8-12 years old are engaged in Summer Robotics Camps. As a result of the 4-H and *F.I.R.S.T.* partnership, youth are demonstrating teamwork, cooperation, and critical thinking skills. Survey responses indicate that 90% of the youth are interested in careers in engineering or business. Graduated FRC youth are attending college with engineering or technology majors. 4-H and *F.I.R.S.T.* have created a partnership that will advance science education for youth in America.

4-H ANIMAL SCIENCE DISCOVERY

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4-H Animal Science Discovery - 4-H'ers learning about Agriculture Careers through a Spring Break Field Trip

The Northwest Arkansas Animal Science Spring Break Program was started in 2010 in a Multi-County programming effort to give youth a firsthand experience on how the information they are learning in Beef Quiz Bowl and Livestock Skills are used in the "real world." Over the years it has expanded from a dozen participants from 2 counties, to including 55 participants from four neighboring counties, Benton, Washington, Crawford & Sebastian.

The Program consists of three days and two nights of traveling to participate in hands on tours and workshops during spring break. Participants were able to learn about their projects as well as exploring various career opportunities in the Animal Science Field.

This program also provides 4-Hers with a glimpse of various Universities to provide them with a broader view of agriculture education, degree fields, and industries that they may not have previously been exposed to. 100 percent of the participants have indicated that they have learned new aspects of Animal Science.

4H EDUCATIONAL CAMPS

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The need to educate our youth about life skills is a tremendous responsibility of county agents. Today's youth are technology oriented and do not get the opportunity to experience more traditional 4-H programming. There are incredible educational opportunities present at county, district and state. These avenues give the youth an opportunity to exhibit their 4H projects and leadership skills. One example of an educational program is the summer 4H day camp program in Lonoke County which provides senior 4-H'ers the opportunity to showcase their leadership skills and an educational opportunity for the youth of the community. It is through youth educational programs that they acquire the knowledge and leadership skills needed to plan, conduct and evaluate an educational camp which are conducted in Lonoke County each year. Educational impact of this program is measured through various means; some of which are membership in 4-H, specifically leadership related projects. Evaluations will continue throughout the life of this program and I would like to share this information with other agents in the NACAA.

A NEW PROGRAM PREPARES YOUTH FOR AGRICULTURAL ENDEAVORS

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Manatee County has over 313,000 acres of production agriculture and ranks 7th in the state of Florida in agricultural sales. However an aging workforce threatens the future viability of these enterprises. Therefore it is vital to inspire our youth to consider careers in agriculture. On June 27th 2014, the inaugural "Green & Growing Youth Field Day" introduced more than 25 youth ages 8-13 to the world of commercial agriculture through various educational field trips and activities designed to demonstrate that careers in agriculture are important and challenging. At the Gulf Coast Research and Education Center in Balm, the youth learned about the many diverse agricultural careers by speaking with researchers and participating in scientific, hands-on activities. They then

toured a local nursery where they learned about propagation, transplanting, growing, and selling native plants. They also toured the Manatee County Master Gardeners' demonstration gardens and learned to transplant and care for a seedling which they later took home. They discovered the art of butterfly farming, and played a variety of agriculture-themed games. Participants included a diverse group of youth from different areas of Manatee County. They were provided the opportunity to explore science and technology in an agricultural setting and became interested in careers in agriculture. Evaluation results showed the youth had a 39% increase in knowledge about agricultural science, a 36% increase in knowledge about the nursery business, and a 28% increase in interest in pursuing a career in agriculture.

AGRICULTURAL ISSUES DETERMINED BY YOUNG LEADERS

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Participants in the North Carolina Agricultural Leadership Development Program identified key issues affecting agriculture in the state to present to legislators in Washington, D.C. in February, 2015. The issues selected were determined by the entire group of 35, then evenly distributed to teams for refining the topic and developing action items for decision-makers.

The issues included the Affordable Care Act; Providing Our Farmers Skilled, Legal, Long-Term Migrant Labor Options; Changing Public Perception of the Agricultural Industry; Redefining Waters of the US; Agricultural Research Funding; and the Importance of Infrastructure Improvements in North Carolina Ports.

The issue teams with Ag Agent involvement are reflected in this poster. All issue papers are included in the link.

The NC ALDP selects three dozen agricultural leaders from across the state to challenge and support these individuals to grow into the leaders of the agriculture industry. Participants make up a cross section of agriculture and include early to mid career agriculturists in crop production, industry, government, and Extension. Two years of monthly, week-long sessions in the off season are invested in these leaders to change their own operations and their communities as well as to contribute to the agricultural industry as a whole. Mastering one's self, Mastering Relationships and Understanding national and global issues are major tenants of this program.

This poster is a glimpse at what happens in the program since these issues were discussed with national representatives and senators for North Carolina and were brought back home to

share with local interested parties.

AGRICULTURAL LENDERS SEEK PROFESSIONAL DEVELOPMENT FROM OHIO STATE UNIVERSITY EXTENSION

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Ohio Agricultural Lenders have sought professional development from Ohio State University Extension for over 25 years. Three, one-day seminars in 2014 reached 93 Ag lenders that reported having 19,862 farm customers served with knowledge gained from OSU Extension. Knowledge gained was measured by a post/pre survey instrument that lenders self-measured pre and post knowledge on seminar topics. Lenders in 2014 improved their knowledge in topics 37% (Precision Ag Technology) up to 69% (On Farm Solar Electric Generation). Lenders reported knowledge gained would be used directly (speak with customers related to farming operation), indirectly (use to review customer portfolios), and as background (professional development and industry awareness) with farm customers. Two topics were identified having high percentage of lenders directly using knowledge gained with customers: Top 10 Ideas to Improve Profits in 2015 (65%) and Tax Management Strategies for 2014 (54%). Two topics were identified having high percentage of lenders using knowledge gained as background use with customers: Precision Ag Technology (48%) and On Farm Solar Electric Generation (42%). Knowledge gained by lenders will reach a diverse demographic of farm customers borrowing \$3.7 billion. Agricultural Lender Seminars are attended by first time participants (28%), repeat participants of 2 to 9 years attending (49%) and long attending participants of 10 or more years (23%). By evaluating the 2014 seminar participants, OSU Extension educators better understand the important multiplier effect of teaching a group of professional agricultural lenders and reaching over 200 times the number of Ohio farmers with OSU Extension education.

AN EVOLUTION OF CONSERVATION PROGRAMS IN US AGRICULTURAL POLICY

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Conservation and environmental protection have been a part of agricultural policy in the United States since the 1930s. Early conservation efforts focused on reducing soil erosion in light of devastating dust storms throughout much of

the United States. In addition to conserving soil, these early agricultural conservation policy measures were also used as a means to control supply of agricultural products instead of providing financial assistance to farmers. This was done by paying farmers to retire highly erodible lands from agricultural production altogether. Over time, agricultural conservation policy began to progress beyond reducing soil erosion to also include enhancing wildlife habitat and addressing air and water quality concerns. Modern day agricultural conservation policy still includes some land retirement programs, but is increasingly evolving to encourage conservation efforts, environmental protection and good stewardship of resources on land that is actively used for agricultural production. An overview of the incentives, activities, impacts and benefits of the four main conservation programs under current United States agricultural conservation policies will be covered: the Conservation Reserve Program (CRP), the Environmental Quality Incentives Program (EQIP), the Conservation Stewardship Program (CSP) and the Agricultural Conservation Easement Program (ACEP).

ASSESSING SAFE GARDENING PRACTICES IN NEW JERSEY SCHOOL AND COMMUNITY GARDENS.

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Recent legislation in New Jersey has allowed schools to serve produce grown in community gardens as long as the soil and water has been shown to be free of contaminants, and food handling requirements are followed. In light of this, Rutgers Cooperative Extension conducted an online survey of community and school gardeners in order to assess current safe gardening practices and training needs. A 28 question survey was emailed to 220 garden contacts as well as promoted by various gardening organizations throughout the state from January through March, 2015. The majority of respondents- 91% (n= 68) use municipal water although 24% indicated they also use harvested rainwater for irrigation. Few indicated their soil was tested for lead (23%). Many indicated some wildlife intrusion in the garden (67%). Of the 67% who are composting at the site, 27% are using animal manures. The greatest uses of the produce is for school cafeterias/classrooms and gardener consumption (both over 40%). Only 23% of respondents indicated someone at the garden had attended a food safety training with 26% indicating they were not sure. The majority have hand washing stations available (60%) and 49% indicated they felt wildlife posed the greatest risk of pathogen contamination in their garden. Survey results indicate additional training and outreach is needed in order for gardens to effectively implement safe garden practices. Additional survey results will be presented as well as new recommendations for testing and food safety practices in the garden available at <http://njaes.rutgers.edu/pubs/publication.asp?pid=E350>

ATTRACTING BENEFICIAL INSECTS TO LOCAL FARMS - BANKER PLANT IN-SERVICE TRAINING

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⁵Professor, University of Florida, Apopka, FL, 32703

Pressure to be environmentally friendly combined with significant numbers of pesticides being pulled from the market and replaced with new, more selective products requires Extension agents to keep clients up to date on the latest integrated pest management options. It is crucial Extension agents stay on the cutting edge of new developments in pest management. Many traditional chemical companies have entered the realm of biological product development. Research is being conducted to verify reliable beneficial insect resources and an In-Service Training was necessary to keep agents and growers up-to-date. A beneficial insect rearing plot was installed at the University of Florida Mid-Florida Research and Education Center in Apopka, FL. Crops planted in the plot were evaluated based on ease of establishment and reported to participants. Educational activities consisted of presentations from Extension specialists and researchers, tours of the beneficial habitat plot, a banker plant greenhouse study, a live viewing of beneficials/pests and an overview of beneficial rearing procedures. As a result of the Banker Plant Utilization in the Greenhouse and Field IST, three Commercial Horticulture Extension Agents are working with their clientele (three citrus groves, a large greenhouse operation, and one large ornamental tree farm) to develop on-farm beneficial insect habitats. One Urban Horticulture Extension Agent is implementing banker plant education into her Master Gardener program and installing banker plants at the county demonstration gardens.

BACKYARD POULTRY MANAGEMENT PROGRAM

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Needs assessments in Craven and Jones Counties showed interest in educational programs on how to properly manage backyard poultry. To address this need, I began an annual Backyard Poultry Management program in 2011. The class has grown significantly over the years, with more than 30 people per class one year, and the need of expanding the class into a two-part series - a beginner class and an advanced class.

The speakers are all poultry specialists with North Carolina Cooperative Extension, including our poultry Veterinarian. Topics include Brooding and Laying, Regulations for Selling Eggs, Coop Design, Chicken Breeds, Disease Management,

Feeding and Nutrition, Predator Control, Biosecurity, and Proper Fencing. The speakers present these topics and address questions. Educational materials are provided to the participants as well as they are informed of upcoming poultry events and field days.

The target audience included individuals who already owned poultry and wanted to better manage their flock and those individuals who were interested in owning poultry. Goals of the program included helping participants better manage their flocks and save money, as well as promoting the poultry industry.

To gauge impacts of the program, evaluations were distributed and compiled for future program planning. In addition, “six-months after the workshop” evaluations were mailed to participants to see what practices and behavior changes they adopted. The evaluations showed participants estimated this program saved them \$500 - \$1,000 on average and showed an overall increase in poultry management knowledge and understanding.

BEGINNING BEEKEEPING WORKSHOP 2014-2015

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The Beginning Beekeeping Workshop was offered regionally to clients in south central Kentucky. It was designed to offer clients the opportunity to learn the basic skills necessary to begin keeping honeybees. The course was divided into four indoor sessions and a field event. Participants had sessions on honeybee biology, beekeeping equipment, constructing beehives, honeybee colony management, and a field event will be held when the weather breaks so they can see inside a beehive with an experienced beekeeper. The sessions on equipment and constructing bee hives used a very hands on learning teaching method. Participants were able to try on or touch all the basic equipment used by beekeepers. They also built all the parts of a beehive that they will be using. The participants were given a 3 ring binder of reference materials. These contained extension publications, and power copies of all power point presentations used in the course. 16 participants from 4 counties took part in the course. Classes rotated between Butler and Warren county Kentucky. Electronic evaluations were collected using the “clicker system” after the classroom sessions and paper evaluations were used to evaluate the lab portion. Of the 16 participants 13 had no working knowledge of honeybees at the beginning of the program and 9 were not regular users of the extension office. Participants have already reported purchasing 20 colonies for the upcoming season.

BIRDING 101- HOT TOPIC FOR A NEW AUDIENCE IN OSCEOLA COUNTY, FL

Foerste, E.C.¹

¹Courtesy Agent Ii, University Of Florida, Kissimmee, FL, 34744

Objectives: Participants learn to identify local birds, natural bird foods, native plants, local ecosystems, environmental issues, and places to go birding and will utilize birding resources. **Program Activities:** The free 5 part evening series (ten hours) was offered spring, 2014 and again in the fall due to positive feedback. **Teaching Methods:** Sessions included an agenda, upcoming events, presentations, sample reference books, trail guides, practice using optics, and native plant identification. Participants attended field trips offered by Audubon and the Native Plant Society to get more practice and continue to develop friendships with classmates. Participants were offered an opportunity to purchase thumb drives instead of getting print handouts. **Results:** Thirteen volunteers from 3 organizations helped 180 individuals learn about birding and related topics. **Impact Statement:** One hundred eighty residents participated in Birding 101, a five part educational series. A follow-up survey (n=45) indicated that participants increased their knowledge of local birds (95%) and local ecosystems (70%); visited new birding locations (61%); installed native plants for birds and wildlife in their landscape (79%); learned of other organizations to get involved with to learn more (81%); and attended other activities related to wildlife viewing after attending the program (66%). **Evaluation:** Turning Technology was used to check knowledge gained at the end of the sessions. A Qualtrix follow-up survey sent to 156 participants indicated that one third of the respondents (n=45) had not previously attended a UF IFAS Extension program indicating the topic was meeting a need of a new Extension audience.

CHALLIS EXPERIMENTAL STEWARDSHIP PROGRAM: FOSTERING COOPERATION AMONG AGENCIES, PUBLIC LAND USERS, AND RANCHERS IN IDAHO

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The Challis Experimental Stewardship Program (CESP) was created by Section 12 of the Public Rangelands Improvement Act of 1978 to mitigate grazing reductions to area ranchers, help stabilize the local ranching economy, and to develop cooperation among users in the pursuit of proper and innovative rangeland management. The CESP had many early successes throughout the '80s and '90, but had become in-active in the late 2000s. Ranchers and land management agencies approached University of Idaho (UI) Extension to help keep the CESP a viable program. From 2009-2014, UI Extension successfully organized and held two business meetings each year, as well as held a rangeland tour every summer to get people on the ground to discuss land management issues and

develop solutions to problems. Since 2009, over 300 attendees have participated in a CESP rangeland tour. Topics include: Endangered Species Act (ESA) consultation process, Multiple Indicator Monitoring (MIM) protocols, photo monitoring tips, permit renewals, effects of fire and noxious weeds on sage-grouse habitat, limitations on management imposed by litigation, and stewardship of Idaho's rangelands. On post-tour evaluations, 95% of attendees ranked the CESP tours as "outstanding" and the remaining 5% ranked them as "good" when given 5 options (outstanding, good, average, poor, not worth my time). In an area dominated with public lands (97% in Custer County), the CESP has proven worthwhile. With the help of UI Extension, the CESP will continue to educate public land users about rangeland management and foster cooperation among agencies, public land users, and ranchers.

CLUSTERING RAIN GARDENS: A NEIGHBORHOOD APPROACH TO WATER RESOURCE ISSUES

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A regional stormwater plan identified a critical area contributing to water quality and quantity problems in the Troy Brook. Our objectives were to install demonstration residential rain gardens in a neighborhood adjacent to this critical stream area, educate the residents about rain gardens, and determine factors that led to adoption. We installed seventeen rain gardens in two phases; three more gardens are planned for spring 2015. Willingness to investigate installing a rain garden increased by 75% from Phase I (2010) to Phase II (2014), and knowledge about rain gardens was higher in comparison to a control neighborhood. Based on a 2015 survey, awareness of rain gardens increased due to several factors; the highest factor scored was seeing a neighbor's previously installed Phase I rain gardens. This was confirmed in survey comments and even the choice of a rain garden design. The rain gardens disconnect 15,065 ft² of impervious surfaces and capture, treat and infiltrate 338,226 gallons of stormwater on an annual basis. Clustering rain gardens can provide environmental and educational benefits.

CLYSTA WILLETT NATURE TRAIL AND NATIVE GARDEN

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Clysta Willett Nature Trail and Native Garden is located in Mountain Home and consists of five subtrails in a 14-acre site. The property was donated by Clysta Bertha Smith-Willett to the City of Mountain Home in 1977 with the stipulation it be used as a park for area youth and residents. Originally part of the Willett Family Farm, the trail offers a diversity of woodland habitat for a variety of wildlife and native plants. The trail connects to nearby Keller Park. In 2002 the Baxter County Master Gardeners (BCMG) adopted the portion known as the Wildflower Trail as a sanctioned project, and

have in a collaborative effort over the past 12 years created seven gardens that contain over 100 different native plants. The Clysta Willett Native Garden is a display garden that provides education to the community about native plants, encouraging use in the home garden. This garden exemplifies the beauty that nature has given to us with plants that thrive in the Ozark climate and can withstand the harsh Arkansas summers. With this goal in mind, a brochure outlining the history of the Clysta Willett Nature Trail and Native Garden listing a portion of the native plants by bloom color has been developed by the BCMG. This will allow visitors to further research plants of interest that can thrive in our difficult Ozark summers.

COLLABORATIVE EFFORTS TO SAVE HEMLOCKS IN OHIO

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Eastern Hemlocks dominate the vegetation in the beautiful sandstone gorges of the Hocking Hills with more than 3 million visitors, \$115 million in annual business activity and supports more than 900 jobs. Loss of hemlocks in the region would seriously impact the tourism industry in the region. In 2012, Hemlock Woolly Adelgid (HWA) was first found in Ohio near the Ohio River and in 2013 in the Hocking Hills State Park. This prompted Ohio State University Extension (OSUE) to begin to work with partners to develop educational programs to enhance awareness of HWA among the public and natural resources managers. OSUE has worked with the Ohio Department of Natural Resources (ODNR), Ohio Department of Agriculture (ODA) and others to: 1) Confirm, delineate and map HWA positive hemlock within the state park. 2) Develop and offer training opportunities on hemlock inventory and HWA survey methods. 3) Establish an insectary for HWA predator beetles in landscapes near the Ohio River. 4) Chemically treat more than 800 trees in the infestation and adjacent buffer zones. We also plan to be actively involved in efforts to: 1) Enhance early detection and rapid response capabilities. 2) Inventory hemlock stands to be utilized in the formulation of future plans of action. 3) Seek external funding sources and continue to establish HWA predator beetle populations. OSUE has trained over 1000 individuals at 25 sessions to date. This effort can serve as an example of how Extension can collaborate with others to have a positive impact.

COMMUNITIES COME TOGETHER TO SUPPORT YOUTH LIVESTOCK PROJECTS

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The youth of today have many choices and pressures. Our youth need projects that develop life skills, responsibility and discipline. Youth livestock projects provide all these and more. Youth who participate in the program tend to be better managers of finances, responsible and disciplined. However, livestock projects are expensive. Each year a committee of volunteers consisting of community and business leaders plans and conducts the White County Fair Junior Market Animal Auction. The Junior Market Animal Auction was designed to recognize and reward youth for all of their hard work on their livestock projects. These rewards help offset the expense of purchasing, feeding, raising and exhibiting livestock at the county, district and state fairs. The committee contacts and recruits potential supporters. Potential supporters are encouraged to participate in a luncheon and to visit with the youth about their livestock projects prior to the auction. Forty White County Junior Market Animal Exhibitors participate in the auction. An additional 51 youth also receive support through the program. The auction is solely supported by the businesses and community leaders. In 2014, there were 114 supporters raising \$80,720. All the funds raised go to the youth. Since 1995 the program has considerably increased in participation, supporters and funds raised. This program has resulted in better youth for White County and increased the community and business leaders concern and support of White County youth.

COOPERATIVELY GROWING OHIO'S HOPS INDUSTRY

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With the growth of Ohio's craft brewery industry, hops are making a comeback as a high value specialty crop opportunity for Ohio farms. Three years ago less than 10 acres of Ohio

hops were planted in Ohio. In 2014 USDA estimated 100 acres planted in Ohio with 30 mature acres being harvested resulting in \$2.4 million in sales. Growers report a net return of \$5,820 can be expected from an acre of Ohio hops. With increased demand for Ohio hops, the Ohio State University South Centers partnered with the USDA Ohio Cooperative Development Center to assist with the formation of the Ohio Hop Growers Guild (OHGG) in 2013 and 2014. The OHGG mission is to help farms with group supply purchasing, processing, education, advocacy, marketing, promotion, communications, research and industry representation. This poster will describe the formation process and the one-on-one training performed by Extension Specialists from the idea stage, to the drafting and filing of articles of incorporation, to election of board of Directors and membership recruitment. The formation of the OHGG (December 22, 2014) has resulted in a membership of 65 hop farmers that combined are currently growing 2/3 of Ohio's 100 acres of hops. OHGG provides custom hop drying, pelletizing, packaging and mobile harvesting services for its members to reduce high infrastructure start-up costs for new hop farmers. This project may be helpful to Extension Educators that are working with other agricultural specific organization formations which have similar missions.

CORNELL UNIVERSITY COOPERATIVE EXTENSION / SCHOOL RESEARCH PARTNERSHIP

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Seventy-eight students, so far, in grades seven through twelve have participated in field crop research through the Cornell Cooperative Extension / School Research Partnership. Research projects have focused on corn seedling insects and their control with predatory nematodes. Students have conducted lab bioassays; sampled white grubs in the field; and infested plots with black cutworm and collected data on injury. The students not only get a real research experience, but have actual data to write research reports. This applied research will be used by Extension for farmer education programs. This Partnership addresses several priorities of student education and Extension. It teaches students how to do research by engaging them in STEM (science, technology, engineering, and math). Youth are exposed to agriculture and the potential career opportunities for them. The capacity of Extension Educators to do applied research is increased by having student help. Farmers benefit from the local research conducted. Developing an Extension / School Research Partnership also increases the avenues to pursue grants, because the purpose of the grant includes giving students an educational experience. To facilitate the development of more Extension / School Research Partnerships by other Extension Educators, a four-class curriculum has been developed. It includes PowerPoint presentations to teach principles, classroom activities to illustrate principles, pre- and post-tests for evaluation, student assignments, and an outline to effectively organize a farm field day to show students the impact of research on the agricultural industry and on the farmer personally.

COWBOY SCHOOLS - GETTING DIRTY & MAKING MONEY

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Southeastern Idaho beef producers expressed frustration regarding how calves were being worked by “weekend” cowboy branding crews. Basically, working events were not as successful as they could have been and were causing financial losses. Beef management practices were sound and effective, but were in need of updating with new, more useful technologies. A disconnect between producers and industry technological advances exists today, leading producers to seek help from Extension in addressing these problems and making animal management strategies more profitable. Producer stated needs included training on new tools, technology, and management methods.

To create an optimum educational environment that would go beyond classroom presentations, we developed the concept of “Cowboy Schools.” The goal was to develop a program that was hands-on, fun, engaging and useful. The main objective was to provide a learning environment in which producers could learn new skills they could take directly to the ranch. We procured funding to pay for program costs and got to work using the motto, “See It. Do It. Learn It.” We assembled a dynamite Extension team. Together we selected annual themes for presentations and hands-on training. By providing high quality instruction, presentations and hands-on training in the corral, producers were motivated and willing to adapt new skills to their operation. A total of six classes have been held in three selected Idaho locations. The program has reached 184 producers in just two years! One-hundred percent of surveyed attendees have indicated they learned something new that could be implemented on their ranch.

DEVELOPING A SUCCESSFUL FIELD NIGHT THROUGH COLLABORATION

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Ohio State University (OSU) Extension reorganized creating an environment where educators were encouraged to work cooperatively in defined Extension Education and Research Areas that encompassed 9 to 10 counties. Local educators identified the need to work cooperatively with the Ohio Agricultural Research and Development Center (OARDC), Jackson Branch, to deliver an annual field night focusing on topics important to the cattle industry in Ohio. Working cooperatively, OSU Extension and OARDC created a strategy to develop and grow a field night event to provide educational programming to cattle producers in the region. This included the identification of potential participants, developing a marketing strategy, getting producer buy-in of the program, measuring learning, and using participant feedback to develop future programs. All these efforts collectively led to the success and growth of the Jackson Beef and Forage Field Night. Attendance increased by 67% from year 2 to 3 and 120% from year 3 to 4. Knowledge gain, reported on a six point Likert scale, ranged from 0.68 to 2.14 on key learning objectives with an average knowledge gain of 1.44 in year three and 0.93 in year four. Another important outcome of this program is it has elevated the importance of both OARDC and OSU Extension to cattle producers in the region.

DEVELOPING ALTERNATIVE AG OPTIONS: POULTRY FLOCK MANAGEMENT

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Scott County has experienced a significant increase in poultry production over the last four years in a wide array of operations ranging from commercial flocks of 700 birds to small backyard flocks for pleasure and enjoyment, to farms working towards a goal of sustainability and providing eggs and meat for their own consumption. In response to the growing popularity of this commodity, the Scott County Extension ANR Agent coordinated programming to increase the knowledge base of these farmers on basic topics like nutritional requirements, disease prevention, and management tips to increase egg production and increase the overall successfulness of their flock. Dr. Jacquie Jacobs, UK specialist, taught a workshop to discuss the basic foundations for raising healthy poultry flocks including nutrition and disease management and also allowed time for an extensive question and answer session. The six farmers, raising a total of 850 chickens, in attendance noted in their surveys the question and answer session was the most beneficial since all of their operations were unique

from one another. Scott County ANR Agent made farm visits with each of these producers before and after the workshop for additional assistance. All of the farmers had made changes to their nutritional protocol and had experienced an increase in egg production, and the farms that had elevated mortality rates in their flocks were able to improve their flock health by improving their nutrition and health management. Overall “Improving Poultry Flock Management” benefited the small to large flocks economically.

DEVELOPMENT, MARKETING AND USAGE OF THE ONLINE TRAINING OF THE MISSOURI MASTER GARDENER PROGRAM

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Adapting the Missouri Master Gardener (MG) in person training to online format began in 2011. The existing manual (MU Extension publication CB19) is central to the program and is comprised of 14 chapters on horticulture topics. While corresponding PowerPoint were available for each chapter, they were revised and standardized for online delivery. Four regional and five state specialists scripted and recorded chapter presentations, termed sessions. Sessions were divided into modules (varying from three to nine) and modules are five to 30 minutes in length. Moodle (an open-source web application) was selected by MU’s Extension Technology and Computer Services (ETCS) to offer the training. Tests of ten questions were incorporated into each session, with an average minimum score of 70% required to pass. Enhancing delivery are video clips and group participation, encouraged through a chat room and session questions. The course is offered for \$175, follows MU’s fall or spring semesters, and began in fall of 2013 (<http://extension.missouri.edu/mg/home.aspx>). The small first class of six served as a test run and was followed by twenty-five enrolled in spring 2014. The course was actively marketed that summer, in print and online. The fall 2014 semester had 51 and for spring 2015 enrollment reached 62. State or regional specialists facilitate each class (less than 35) and ETCS handles technical issues. Evaluations at semester conclusion indicate satisfaction; 80% have successfully completed. In the fall of 2014 online students accounted for 27% of the students statewide who completed MG training.

EASTERN OHIO SHALE DEVELOPMENT AND PRIVATE WATER SUPPLY

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Eastern Ohio has seen a shale boom in the past five years. During the initial phases of oil and gas development, quality land leases that benefited private landowners were a major priority in Extension focus. Currently, residents are seeing much horizontal drilling activity into the Utica Shale. Whether drilling was on your land or your neighbor’s, water quality became a major concern for landowners, especially those with private water sources. According to the Ohio Department of Natural Resources (ODNR), the predominant oil and gas related contaminants in ground or surface waters are chloride and sodium (principal components in brine waters). In response to a local need for shale gas development education regarding water quality, OSU Extension developed curriculum addressing concerns. Many eastern Ohio landowners utilize groundwater sources for their farms and personal use and responded well to this educational workshop. Seventy-five percent of participants had a private water source; forty-nine surveys were utilized. Landowners from all over the region have experienced some impact based on this industrial development. Of those who turned in a survey, ninety-two percent improved their knowledge regarding shale development, and ninety-one percent were more inclined to test their private water sources. There are still multiple questions, but many landowners are taking the proactive approach to water protection with more direction due to this OSU Extension program.

EASTERN REGION SOYBEAN SCOUTING SCHOOL

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The production of soybeans in East Tennessee has increased over the past few years. Good soybean prices have been a driving force in this increase of production. According to the National Agriculture Statistics Service soybean acreage planted is up 16,000 acres from 2007 to 2012, in the East Tennessee agriculture District. The East Tennessee Soybean Scouting School focused on improving production in East Tennessee. Topics for the program included: plant growth and development stages, weed management, primary insect pests, primary plant diseases, and an in field, hands-on, scouting demonstration. Fifty-eight participants attended the scouting school including: farmers, industry leaders, and educators. Participants of this program reported that it had an economic impact of \$165,500. The 58 participants of this program reported to have gained

knowledge on weed management, plant growth/development, primary plant diseases, and insects, as well as gaining the knowledge in how to scout fields for insects and diseases.

EDUCATING FARMERS ABOUT INVASIVE SPECIES IN PESTICIDE TRAINING WORKSHOPS

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There is a growing number of invasive species in Minnesota. These invasive species (insects, plants, etc.) are found in all landscapes including our rural and agricultural areas. In an effort to educate farmers about important invasive species which can affect farmer's income and environment, it was determined to conduct a short presentation during the private pesticide applicator workshops for farmers. Private pesticide applicator workshops are held in the winter months throughout the agricultural regions of Minnesota. These meetings give an update of new pesticide regulations, safety practices and pesticides. The workshops are required to update individual farmer's license to apply pesticides and are well attended. We focused on four invasive species affecting rural areas: Emerald Ash Borer (affecting Ash trees in windbreaks, rural communities and widely planted in farming regions), Brown Marmorated Stink Bug (affecting over 300 plants including apple trees, grapes, corn and soybeans) Buckthorn (a small tree which is host to the over wintering soybean aphid and found in windbreaks and woodlands throughout the state) and Oriental Bittersweet (an extremely invasive perennial vine which changes the understory of windbreaks and woodlands). Workshop topics included history, life cycle, identification, damage and control. Free ID cards and handouts were available for participants. A similar presentation was added to the Ag Professional pesticide trainings held in MN. Over 1,184 farmers and commercial pesticide applicators were presented this lesson in 2014. A review of this educational program including topics and evaluations has been documented. This program can be replicated in other states.

ENCOURAGING ECONOMIC DEVELOPMENT THROUGH THE 2014 GULF COAST AGRITOURISM AND ECOTOURISM BUSINESS DEVELOPMENT CONFERENCE

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Escambia and Santa Rosa counties, located in the northwestern portion of Florida, have had successive setbacks to economic development by hurricanes Ivan and Dennis in 2004-2005, followed by the economic downturn of 2008 and the oil spill of 2010. Local businesses, particularly those catering to vacationers and seasonal residents, suffered considerably due to actual and perceived damage from the oil spill. In response, agents developed a two-day Gulf Coast Agritourism and Ecotourism Business Development Conference. The objectives were to improve economic development, create and develop small businesses, and highlight the relationship between ecosystem health and that of Florida residents and visitors. The conference was held at a long established ecotourism venue in Santa Rosa County. Sessions included training on marketing, insurance/liability, employee benefits and healthcare, and professional associations. Agents moderated a panel discussion of experienced business owners and led afternoon agritours. The conference attracted 50 clientele, 14 agents and specialists for in-service training, and 6 tourism industry professionals. Based on a post-conference evaluation, there was a 50% increase in knowledge of agritourism, ecotourism, and marketing campaigns. Ninety two percent (92%) plan to use knowledge gained during this conference to fine tune their business operations, and 98% will encourage others to contact Extension for more information about developing agritourism/ecotourism enterprises. Twenty-four percent (24%) of these entrepreneurs have implemented marketing techniques learned at the conference. We believe well-run, successfully marketed agricultural and natural resource-based enterprises have a bright future and are key to sustaining Florida's tourism industry, local ecosystems, and food production.

EVALUATION OF THE MANAGING FOR TODAY AND TOMORROW TRANSITION PLANNING COURSE FOR FARM AND RANCH WOMEN

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Farm and ranch transition planning maintains rural business continuity and enhances national food security. Yet, there is hesitation and lack of transitioning progress on far too many family farms/ranches. The Annie's Project educator team set out to develop a new curricula to support women seeking successful transitions. The resulting curricula, called Managing

for Today and Tomorrow, provides training on business, estate, retirement, and succession planning. The course helped farm/ranch women and their families/partners accept transition planning as normal, necessary, and doable. The program evaluation results demonstrate the important role extension educators have in helping farm/ranch women make good transition planning decisions. The consistently high level of agreement with the Annie's Project best education practices across a varied farm/ranch women audience, 16 different educators and 10 different states demonstrates the high quality of the curricula and course design. The course helped women gain knowledge fairly uniformly across all topics, indicating all topics were of interest and that all topics were necessary components of transition planning. Women significantly increased their knowledge of transition planning tasks. Within the time-frame of the multi-session courses, farm/ranch women took important actions towards their transition planning goals. Farm/ranch women accessed relevant resources, developed helpful networks with other farm/ranch women and professionals/service providers in their communities, and made significant progress on transition planning tasks during the course.

FACULTY PARTNERSHIPS RESULT IN RESOURCES TO SERVE GROWING HOPS INDUSTRY

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The Virginia craft brewing industry is growing rapidly and demand for locally-grown hops has increased due to shortages, value systems favoring locally-grown materials, and increased interest in the use of fresh hops. Despite the increasing number of growers, Extension resources for the industry were limited prior to 2013. In 2013, a team of agents and specialists met with growers to formally assess needs. Growers requested soil testing for hops, a hops analysis service, pest control information, and management and marketing resources. A team of Extension faculty with a special interest in hops initiated efforts to build university resources for the growing industry. Several faculty teamed together to collaborate with the Old Dominion Hops Cooperative to provide support, continually assess needs, and offer outreach. Agents and specialists organized and presented several hops meetings for stakeholders in 2014, provided interviews about hops to the media, and fielded dozens of questions from prospective growers. In 2013 and 2014, an agent-specialist partnership resulted in a brewer survey which assessed experiences with Virginia hops and provided growers with feedback. The same team issued a 2014 grower survey resulting in data presentations to growers and a summary publication. Agents also relayed stakeholder requests for a hops analysis service and hops soil testing code to specialists and laboratory faculty, resulting in a collaborative meeting and the establishment of both services. Agent-specialist partnerships in 2014 also resulted in a 2015 hops pest management guide, a grower guide, and a weed control guide.

FORGING DIVERSE PARTNERSHIPS TO ENHANCE COMMUNITY BUY-IN AND WATER QUALITY STEWARDSHIP

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Northwest Arkansas has experienced rapid urban growth in the past several decades, putting increasing pressure on nonpoint source pollutants on local water resources. A 319 grant was awarded to conduct water quality education and outreach in the Lake Fayetteville Watershed, which is surrounded by two cities with populations exceeding 149,000 residents. Successful programming and outreach is reliant on strategic partnerships and capacity of grassroots organizations. The Lake Fayetteville

Watershed Partnership (LFWP) has been the leading steward of the Lake Fayetteville Watershed for over a decade, but their scope and residential outreach was limited by size and funding. Through this grant, the University of Arkansas Cooperative Extension System (UACES) has played a key role in building capacity for the LFWP by strengthening existing relationships and forging new community partners that sponsor watershed programs, contributing volunteers, and conducting stewardship activities within that mitigate pollutants from entering Lake Fayetteville. Additionally, extensive efforts have been made to involve more watershed residents in watershed stewardship such as stream cleanups, riparian plantings, and best management practice workshops. The bi-annual Lake Fayetteville Cleanup saw record attendance in fall 2013 with 185 volunteers. Capitalizing on existing relationships and seeking support from organizations and businesses whose interest and goals also include natural resource protection has proven successful for helping increase the footprint of the LFWP and resident's awareness of the water quality issues affecting Lake Fayetteville.

GEORGIA MASTER COMPOSTER PROGRAM TRAINS VOLUNTEERS TO PROVIDE COMMUNITY OUTREACH AND EDUCATION

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Created in 2011 by Athens-Clarke County Extension and the Athens-Clarke County Recycling Division, the Georgia Master Composter Program addresses the increasing need for composting education in Georgia. Participants complete a nine-week composting course and then share their knowledge with thousands of community members through approved volunteer opportunities. Totalling over 30 hours of instruction, the course includes nine class sessions and a field trip. Facilitators collaborate with public and private entities and statewide organizations to provide unbiased, scientifically accurate composting information and hands-on programming. Students receive instruction in the chemistry and microbiology of composting, types of and reasons for composting, climate and conditions in Georgia that impact composting, and training for teaching varied audiences. Currently, the Georgia Master Composter Program has trained 56 participants. As volunteers, these participants help fulfill composting education requests, introducing the Extension network to new individuals and community groups. To date, Georgia Master Composter Extension Volunteers have interacted with 3,775 community members. These dedicated volunteers serve a vital role in reducing landfill waste and improving soil in their local community. In addition to education, the Georgia Master Composter Program provides visibility for Extension. Prior to the program, over 50% of Master Composters were unfamiliar with Extension. The program has also generated many new partnerships between Extension and a variety of Georgia communities and organizations.

GIRL SCOUT DAY AT THE DAYTON VETERANS ADMINISTRATION MEDICAL CENTER

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A partnership between the Girls Scouts of Western Ohio, the Dayton Veterans Administration Medical Center, the American Veterans Heritage Center, and the Ohio State University Agriculture and Natural Resources Montgomery County Master Gardener Volunteer (MGV) Program resulted in a program entitled "A Day at The Dayton Veterans Administration Medical Center." The objective was to introduce the 39 girls to the Veterans Administration (VA), VA programs, and ongoing volunteer opportunities while providing educational sessions related to badge requirements. The inaugural "Day" was held in April 2014 with sessions on genealogy, bullying, first aid and safety, a VA grounds tour, and a MGV program on planting seeds, tree identification, and containers. Fourth and fifth grade Girl Scouts participated in sessions on flower parts, growing flowers, and planted sunflowers to take home. The sixth and seventh grade Girl Scouts participated in a discussion of the importance of deciduous and evergreen trees in the environment, how to plant trees, and took home a seedling to plant. Eighth grade and up Girl Scouts participated in developing a living plant container for the hospice inpatient unit. VA program badges were awarded to 39 participants. Post program evaluations revealed the need for intense programming on trees in the environment and "hands on" planting demonstration. The 2015 event focused on the patient simulator, planting four trees on VA property and receiving a seedling to plant. All Girl Scouts and their advisors toured the VA visiting the National Cemetery and the historic "Grotto" that Master Gardener Volunteers are restoring.

GROWING A BEEF MARKETING COOPERATIVE

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Small scale livestock producers are challenged clients who need high volumes of product (beef). The inability to satisfy in part these high volume customers with high quality, consistent product has given rise over history to farmers banding together in an agricultural cooperative. Beef producers seeking a new marketing opportunity created a business designed to aggregate and streamline this system. Clients would see the new entity and have only one point of contact but the meat fulfilling the contract may be coming from several different farms.

In order for this marketing system to succeed, it requires education of all member farms for production, consistent quality in finished animals and the ability to adhere to protocols established to ensure consistent care and handling of the livestock. Adirondack Grazers Cooperative was the entity established to provide to aggregate and supply a small part the Greater New York City market with beef carcasses. Producers received a premium price 20% above standard non-retail outlets even after the 15% cooperative charge for handling the one point billing, scheduling and marketing. Educational programs were conducted to increase financial and production skills as well as inventory management. The cooperative grew by 350% to 36 farms impacting more than 6298 crop and pasture acres for 3863 animals. Each producer in the cooperative expanded their herd on average 15% with non-members adhering to the protocols to prepare to join the system.

HANDS-ON WORKER PROTECTION STANDARD TRAINING

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Skagit County is home to over 15,000 Hispanic residents. This population includes the majority of agricultural workers in the Skagit County. Very few of the agricultural workers in Skagit County have an understanding of the Worker Protection Standard (WPS) created by the United State Environmental Protection Agency (EPA) designed to protect employees on farms, forests, nurseries and greenhouses from occupational exposures to agricultural pesticides, and therefore have the potential to cause harm to themselves or other workers. Workshops were needed to educate the farm worker populations in Skagit County about the WPS to keep workers safe from unnecessary pesticide exposure. Since implementing this educational curriculum, Skagit County has not had any agricultural worker protection standard violations. Through this training employees in Skagit County have become educated enough to know the standards that employers and employees must follow regarding pesticide use. This information has helped Skagit County become a model for agricultural safety and environmental compliance in

Washington State.

HAY RIDE SAFETY EXTENSION EDUCATION RESOURCES FOR AGRITOURISM

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Modern extension programming addresses multiple facets of agricultural operations. Today, agricultural extension programming is no longer solely centered on production. As part of its mission, the Rutgers NJAES Agritourism Working Group conducts research and outreach on many on-farm direct marketing and agritourism issues. Risk and liability management are important for farms with public visitors. A component of many agritourism operations is a hay ride, using a tractor and wagon to transport guests. Many hay ride accidents can be attributed to inadequate supervision or training, poor site and crowd control, or improper operation. In response, the Rutgers team developed educational tools to assist with minimizing risk and accident prevention for hay rides. Key tools developed include a training video, fact sheet, and checklist. The video, Managing Risk on Your Agritourism Farm: Hay Ride Safety, is a 6 minute, 49 second video used at educational events and posted on the site <https://vimeo.com/75228284>. It was downloaded 2,835 times in 2014. Also developed was the fact sheet, Agritourism: Keeping Passengers Safe on Hay Rides (<http://njaes.rutgers.edu/pubs/publication.asp?pid=FS1145>). This publication explains practices and precautions for safe hay ride operation. It discusses inspection and maintenance of tractors and wagons, tractor operation, crowd control, loading and unloading passengers, supervision during the hay ride, and communication. A third tool developed was an agritourism operation farm safety checklist (<http://agritourism.rutgers.edu/training/supplemental.html>). It enables farmers to conduct inspections on farms to help prevent hazards and potential accidents. All three educational tools have been valuable in working to assist agritourism farmers with hay ride safety.

HAY STORAGE PAYS

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In 2012, Arkansas suffered a severe drought that left cattle producers with a hay shortage. Producers in Johnson County were forced to purchase marginal to poor quality

hay. In addition to the quality issues, the hay cost \$50-70 per large round bale, which is twice the average cost of hay in our area. As a result of the hay shortage and high hay prices, educational programs were conducted on the effects of outside hay storage and storage options to reduce waste. University publications estimate that large round bales that are stored outside suffer 20-30% waste due to moisture and soil contact. Averaged sized beef cattle require 4500 pounds of hay per winter feeding program. If the hay is stored outside you will need an additional 900-1350 pounds of hay to offset hay loss. Purchased hay in Johnson County is usually \$25 per large round bale, so hay loss is costing producers \$5-\$7.50 per bale if stored outside. If producers purchased \$50 bales in 2012, the hay loss cost them \$10-15 per bale. The goal for many producers after the 2012 drought was to have a two year supply of hay in dry storage. Metal hay barns with a 500 bale capacity cost \$22,000 to \$28,000. Based on the price of barns, storage capacity, percent hay loss and hay prices, hay barns can pay for themselves in 5 - 10 years.

IMPROVING CHESAPEAKE BAY WATER QUALITY BY CREATING SUSTAINABLE COASTAL WATERSHEDS

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This study is testing best management practices (BMPs) and acceptance in 4 watersheds in the Choptank Basin with similar land use and chemistry. Three will be test watersheds with BMPs densely implemented & one control watershed. Each experimental watershed will test a different class of BMPs (soil, water, or nutrient management). Farmers & residents (stakeholders) will be asked to apply more BMPs to their land. We completed an initial baseline year of monitoring and recruitment. We will add BMPs and continue monitoring over the next 4 years. This study has 3 components: environmental, social, & economic. The ag BMP's will be: **nutrient management**- precision ag, denitrification walls, bioreactors, split fertilizer applications; **water** - drainage control structures, wetlands, Agri-Drains; and **soil** - cover crops, buffers, short season beans to allow time to establish cover crops. Urban BMP's will be denitrifying septic, porous pavers, and rain barrels. Monitoring will include monthly

baseflow & stormflow N, P, & TSS at the outlet of each experimental watershed along with some in field sampling to validate benefits of BMP's. Economics of the practices utilized will be calculated and shared with participants. Sociological surveys are being conducted which is finding that the ag community is more willing to participate in the solutions to a cleaner environment than the urban community.

IN SEARCH OF INVASIVE "BUGS"

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In 2014, Murray *et al.* received funding from the Farm Bill for an Extension Outreach project on Exotic Pests of Concern for Washington State. My objective was to recruit volunteers to assist the Exotic Pest Team in delineating the distribution of the Brown Marmorated Stink Bug, *Haylomorpha halys*, in Washington State. A Stink Bug Wanted Poster was circulated through several State (including Master Gardener and Pesticide Recertification) venues. In a four-month period over 110 digital images and physical samples were received and identified. This poster will summarize survey results of "stinky bugs" found in Washington. The current distribution of Brown Marmorated Stink Bug in Washington is shown. This project shows the potential of recruiting an educated cross-section of WA residents to assist in exotic pest surveys. Success was highly dependent on collaboration between Washington State Department of Agriculture, US Department of Agriculture together with faculty from WA State University and OR State University.

INCORPORATING AN ONLINE MARKET SIMULATION GAME

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Over the past 15 years, Iowa State University Extension established and now maintains 3 successful Ag Marketing Clubs across Central Iowa. The need grew from grass roots efforts to improve the understanding that crop producers, crop share landowners and agribusiness professionals have for a variety of crop risk management issues including crop marketing, government farm programs, crop insurance and emerging agronomic and economic issues. Each of the 3 sites are hosted and facilitated by county Extension professionals with financial support provided by participant registration fees and agribusiness sponsorships. Club meetings are open to the public and are typically held monthly during the winter months and less frequently during the summer. A total of 1,360 participants have been involved in one of the 3 clubs over the past 15 years with over 500 participants attending club events annually. Each club has a leadership team that serves in an advisory capacity to identify and

arrange with speakers and topics on a variety of crop risk management tools and strategies. Program evaluation data collected annually indicates that club participants have net farm incomes attributed to active club participation that are \$3,150 higher. As a result of the Central Iowa Ag Marketing Clubs, a contribution of more than \$1,500,000 is realized for participating club members and the Iowa economy annually.

INCREASING INTEREST IN S.T.E.M. ON “FANTASTIC FRIDAYS”

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Careers are increasingly focused on skills related to science, technology, engineering, and math (S.T.E.M.). S.T.E.M. professions are among the highest paying and also the basis for a globally competitive economy. These jobs require advanced degrees and Montgomery County has a lower percentage of college degrees compared to the state average. A series of summer day camps entitled “Fantastic Fridays” were conducted to increase Montgomery County youth’s interest in S.T.E.M. Fantastic Friday Day Camps focused on various S.T.E.M. topics including: plant science, rocketry, astronomy, photography, wood science, and engineering. Hands on learning activities in each session provided participants with knowledge and encouraged discovery and innovation. Day camps were conducted on various Fridays throughout the summer and concluded each year with a trip to Mid-American Science Museum. As a result of the program, 64% of participants indicated they would like a job related to science. While 91% indicated, they wanted to learn more about science, liked to see how things are made, and can tell others how to do an experiment. Percentage of participants able to identify the effect of wind resistance on rockets increased from 57% to 75%. Sixty-two percent of kids gained knowledge of the effects of mass and pressure on rocket stability. Percentage of participants having knowledge about the size of the solar system, galaxy, and universe increased from 48% to 78%. Evaluation results from this program indicate hands on learning activities are an excellent tool to increase student interest in S.T.E.M.

INSECT TRAPS IMPROVE PROFITABILITY FOR ROW CROP FARMERS

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Agriculture is Virginia’s number one industry with annual sales of \$3.7 billion. Charles City and New Kent Counties have a combined crop acreage of about 32,000. Market value of agricultural products for these two counties is about \$30 million (2012 Ag Census). Black light bug traps have long been used to help determine

when insects are threatening crops before loss is suffered.

Virginia Cooperative Extension owns and operates one black light trap in Charles City and one in New Kent County. The main objective is to monitor corn ear worm moth populations to determine their threat to soybeans. Additionally, Brown Marmorated Stink Bugs and native green and brown stink bugs are watched. Traps are set up in cooperating farmer’s fields and checked twice a week July through September. Results are reported to the county farmers and the Virginia Tech soybean entomologist.

When insecticide sprays are timed using black light data, money is not wasted on unnecessary applications. Preventing one treatment preserves about \$300,000 profit across the counties. In addition, in 2014, a localized infestation of native green stink bugs was detected from black light trap monitoring. Sweep net surveys prompted by black light trap numbers confirmed the pest had exceeded threshold values. Producers sprayed for the green stink bug and prevented a 4 to 8 bushel yield loss. The value of those bushels harvested averaged \$375,000.

In the 2014 growing season, black light bug trap results saved Charles City and New Kent farmers \$675,000.

INVASIVE PLANTS COMMONLY SOLD IN NURSERIES AND GARDEN CENTERS: PREVENTION IS THE KEY

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Invasive plants are severely harming Florida’s natural environment. Invasive plants can cost Florida millions of dollars in control. Invasive plants are readily available and can be found in local nurseries and garden centers throughout Florida. Invasive plants such as asparagus fern (*Asparagus sprengeri*), camphor tree (*Cinnamomum camphora*), lantana (*Lantana camara*), Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonica*) and Mexican petunia (*Ruellia simplex*) are available in retail stores. The availability of invasive plants allows the opportunity for uninformed residents to unknowingly purchase and plant them in their landscape. A series of six workshops were presented to 112 participants. Target audiences were homeowners and Master Gardeners. The objectives of these workshops were to educate clientele on the environmental impacts of invasive plants, identification of invasive plants sold in nurseries and garden centers, alternative plants such as natives or sterile cultivars and to act as a “preemptive” strike against the incorporation of invasive plants in residential landscapes.

According to the survey results, participants demonstrated a 36% increase in knowledge on invasive plant identification. 51% (n=112) of participants stated that they had bought an invasive plant prior to attending this workshop. 98% (n=112) of the participants stated that they will not purchase an invasive

plant after attending the workshop.

A follow-up post survey was distributed and recorded participants physically removing 67 Mexican petunias (*R. simplex*), 11 asparagus fern (*A. sprengeri*), 31 (*L. camara*), 3 camphor trees (*C. camphora*) and 4 Chinese privet (*L. sinense*).

INVESTING THROUGH A PEST AND BENEFICIAL INSECT TRAIN-THE-TRAINER SHORT COURSE PROGRAM

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Insects, both pests and beneficials, are increasingly important to all agricultural crops in the Pacific Northwest. The correct identification of pest insects is critical to successful adoption of integrated insect management. The project objective was to develop a cadre of agricultural professionals that respond to questions and bring a balanced ecological approach with the use of integrated management strategies. We held “train-the-trainer” workshops at 2 different ½ day training sessions. The first workshop was held in December 2013 as part of the Hermiston Farm Fair in Hermiston, OR. The second workshop was held in July 2014, following the Malheur Experiment Station Summer Farm Fest, in Ontario, OR. (A third workshop is slated for Colfax, WA in June 2015.) Both workshops were filled to capacity, with twenty participants each. Participants included crop advisors, field men, commercial applicators, seed company personnel and agricultural specialists. Post-training, the participants 1) increased their knowledge of insect identification by learning anatomical characteristics used to identify and differentiate insect species; 2) increased their knowledge of insect-collection techniques by practicing different methods to collect different types of insects; and 3) increased their knowledge and skill in properly preparing insect specimens to facilitate their identification. We developed a web page for short course training materials at <http://extension.oregonstate.edu/umatilla/ipm>. Benefits from training program are anticipated in the coming years as knowledge in ecological insect management strategies is transferred to a broader audience reaching into rural communities across the region. This short course was sponsored by WSARE Professional Development Program Mini-Grant funds.

JOURNALING TO A BETTER GARDEN

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Extension horticulture specialists in Missouri recognized a need for a journal that could be used by home gardeners to help plan, organize and record the gardening season. From Seed to Harvest and Beyond: Garden Journal and Calendar keeps track of successes, failures, needed improvements and new ideas as the garden season progresses. The journal gives opportunities for thoughtful planning, documenting garden information, recording events and taking notes. It provides research-based information and as well as a guide to help work through issues and opportunities that may arise. Self-observations in journaling horticulture practices can lead gardeners to make wiser and smarter choices in plant selection and placement, soils and fertility, insect and disease control, and general gardening practices. To promote garden journaling, there have been five workshops conducted in several counties. These workshops educated gardeners on journaling options, how to use garden journals and how they could be utilized to improve their gardening experience. There were 115 gardeners who attended these workshops. Many of these gardeners indicated they believe the keys to successful gardening are to get plans on paper first and to keep records. This journal allows a gardener to do this. All gardeners who took the workshops indicated that the garden journal was a great way to stay organized and provided a place to keep all their gardening documents, plans and notes together.

LIGHTING A FIRE IN YOUR FAIRBOARD

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One obstacle a county fair faces is the continuity of leadership when no succession planning has been made. The Polk County (Arkansas) Fair and Rodeo Association needed to replace the president as well as needing new board members. The local agent and current board members thought this would be an excellent opportunity to conduct leadership training. To determine needs, a written and oral needs assessment was conducted. The target audience was current Board members, anyone interested in becoming a Board member and anyone interested in the Association. The results of the need assessments were reviewed, combined, ranked and grouped into categories. Based on the results, a six session leadership program was developed to address the primary objectives which were: develop continuing leadership for filling vacancies; understanding what the duties and responsibilities of an effective Board member were; understanding personalities so they could work with each other better; having a better relationship with the public and media; and develop a strategic plan. Results of the training were: 38 people attended the training and learned new leadership skills; five new Board members were elected from those attending;

a new leadership team elected for the executive board; better public relations with the public and media; 30 new volunteers were recruited; a new policy regarding financial donations was implemented for the Association; and a public assessment was completed by 600 fair attendees that was used in developing and implementing a strategic plan.

LIVESTOCK EDUCATION DAYS

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Presentation of livestock education days (LED). Three separate half days of education and beef, sheep, goats, and swine in preparation county junior livestock show. LED is an effort to teach those youth involved in the jr. livestock program principles of animal production as well as feeding, care, fitting and showing. Each year we pick a different animal science or animal production topic to teach. Our first year we taught carcass characteristics and meat quality; for swine and lamb day we cut and wrapped a half carcass of each species. Youth did the wrapping of retail cuts. For beef day we barbequed steaks of select, choice, prime and quality grade, then had a taste test. We also sampled grass fed beef steaks. The emphasis has been on hands on learning. In our second year we covered nutrition and the digestive system. We emptied the contents of a fistulated cow to teach about ruminant nutrition.

LIVESTOCK WASTE MANAGEMENT FOR PROTECTING WATER QUALITY

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The site selection and management of cattle feeding facilities has a substantial impact on water quality in Kansas. Site location within the prevailing topography and management of cattle feeding pens is imperative to maintaining quality in the waters of the state. There are several factors which should be given consideration when selecting the site that cattle feeding facilities will be constructed, as well as factors that demand attention when managing an existing facility.

Watershed specialists work closely with cattle producers, Kansas State and the Kansas Department of Health and Environment to ensure cattle feeding facilities are designed in a water quality responsible manner. Additionally, these specialists provide educational outreach and promote “off stream” water development, encourage restricting cattle from ponds, and advise on proper grazing management of forage resources.

In the past 4 years, these specialists have consulted with 805 livestock producers, affecting over 34,000 animal units. From their efforts, Kansas waterways have seen a reduction each of those four years of 211,000 pounds of nitrogen, 88,000 pounds of phosphorus and 346 tons of sediment.

This program has addressed and made improvements to the major water quality concerns of Kansas, including sedimentation of federal reservoirs, and nutrient rich waters which promote algae growth.

LONG TERM IMPACTS OF THE WVU EDUCATIONAL DINNER MEETINGS

Richmond, Plaughter, Hamons, Sparks, Wickline¹

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During the past 14 years, the West Virginia University Extension Service (WVUES) has conducted a series of winter educational meetings which are held throughout the state in over 50 locations annually with at least fifteen different expert speakers. The programs are interesting, informative, and have a social value. They are designed for small farm families in WV that are primarily livestock producers operating on a slim margin, both those already in production and those newly entering agriculture.

In an effort to evaluate the long-term effectiveness of the dinner meetings, over 1300 participants that had attended at least one meeting within the last three years were surveyed as to the impact of the program on their farming operation. The results indicated 80% feel they have increased their knowledge due to the dinner meetings; 71% have made a change in farming practice due to the dinner meetings with 30% have implementing a risk management strategy due to the dinner meetings. Additionally, 60% have increased their farm income and 28% have decreased their expenses (over 70% of these producers felt it was “somewhat” or “a lot” due to the dinner meetings for each of those questions). Results of this evaluation documented that a large portion of the producers are gaining knowledge from the programs and implementing production techniques, improving their economic outlook and managing risk on their farms. Our poster will combine these results as well as participant demographics and program evaluations to provide an overview of the impact of our programming.

MANAGEMENT ESSENTIALS FOR FARM MANAGERS

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Agricultural farm businesses have increased in size and scope over the past few decades. This creates a next generation of farm owners, involved in million dollar farm business. Ag lenders in the region wanted educational programming to increase the capacity of these next generation farmers to be successful. Twenty-one next generation farmers participated in the five program series held in Ross County that met every

other week. Topics included financial management, grain marketing, production budgeting, business arrangements, and land rental arrangements. A retrospective pre-post evaluation measured knowledge gain with a five point Likert scale with an average gain of 1.23 points. The greatest knowledge gain was on: Steps to Improve Legal Enforceability of a Land Lease (+1.80); Benefits and Limitations of LLC's (+1.75); Legal Risks of Verbal Farmland Leases (+1.70); and Different Business Structures Available (+1.50). Participants were asked to list the most important item learned. Comments included: The realization that I need to financially account and allocate my time opportunity into my operation; Learning about liabilities, including contracts/laws governing rental land; and Budgeting and marketing to know break even numbers and being able to generate a profit. Additional benefits from the program series included written land rental arrangements, adoption of different business structures, and improved financial records and analysis of participating farms.

MAXIMIZING GROWTH AND PRODUCTION WITH THE MIDDLE TENNESSEE GRAIN CONFERENCE

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Farming corn, soybeans, and wheat in the Middle Tennessee area just west of the Cumberland Plateau makes up a large portion of the agriculture economy for that geographical region. Nearly \$76 million in small grain products were reported sold in 2012 according to the USDA Agriculture Census data. In an effort to provide educational programming to small grain farmers there, UT Extension Agents in a multi-county area teamed up to organize and implement the Middle TN Grain Conference in January 2015. The fee-based program included topics such as: cover crops, variety selection, row spacing, marketing, pest and weed control, Farm Bill decisions, and much more. The conference format was a one-day outline and the program is marketed through local Extension offices, Extension news articles and press releases, and mail outs to potential farmers. Based on the farmers that

participated and reported in this year's conference, more than 134,000 acres were impacted. As a result of this educational effort, one hundred ninety three (193) farmers participated with a total participation of three hundred seventeen (317); representing twenty-three (23) middle and east Tennessee Counties. According to the end-of-program evaluation, an average of forty one percent (41%) new knowledge was gained by participants. Ninety-seven percent (97%) of all participants said they intend to utilize at least one practice gained at the conference to maximize their growth and production during the 2015 cropping season.

MCMINN COUNTY BEEF COLLEGE

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Agent has conducted the McMinn County Beef College for the past Sixteen years. The college consists of five nights of instruction and the sixth night is a steak dinner and graduation. To participate in the college, participants pay a fee of \$50 which includes all educational material, refreshments, steak dinner and cap. Fees obtained from the college have been used to conduct the program, provide operating and travel funds for other programs and are utilized to attend state and national meetings. Surveys and follow up interviews are conducted each year and impact recorded. Average attendance for the past three years has been seventy beef producers. Ninety seven percent of these participants rated the knowledge gained as high or very high for all sessions. The average economic benefit for the past three years has been \$153,000 for each year, which is an average of \$3,230.00 per producer. For the past two years, each session has counted toward the Advanced Master Beef Program. By completing Advanced Master Beef, producers qualify for cost share through the Tennessee Department of Agriculture Enhancement Program. Fifty three producers completed Advanced Master Beef by attending the college in 2014. The total fees acquired from the beef college for the past three years has totaled \$10,700.00

MEASURING LEARNING AND IMPLEMENTING CHANGES THROUGH EVALUATIONS OF THE PEARLS OF PRODUCTION CONFERENCE

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In 2014, the Pearls of Production Women in Agriculture conference completed its second year of education in Missouri, providing hands-on learning for female livestock and forage producers. With 19% of all farms in the United States having women as the principal operator, the curriculum was developed to focus on empowering female livestock producers through practice of hands-on, real world situations under the supervision of female experts. The utilization of comprehensive exit surveys has been instrumental in the improvement and

sustainability of the program. Initial evaluations indicated the need for a full day of hands-on activities. As a result, attendees now have the opportunity to select from multiple sessions to broaden their knowledge. In addition, an influx of younger participants indicated that older, experienced farmers are disappearing, elevating the need of more basic training for the 70% of producers age 50 and younger. Due to changes from the initial offering in 2013, 100% of program attendees would now recommend the program to other woman as opposed to only 88% in 2013.

MID-ATLANTIC PRECISION AGRICULTURE EQUIPMENT DAY

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Mid-Atlantic Precision Agriculture Equipment Day was created to provide novel and up to date education to farmers, agribusinesses, and government stakeholders on current research. As an annual program in its fourth year, Precision Ag Equipment Day has included speakers and demonstrations of new technologies and analysis of precision agriculture data. Every year upcoming technologies are examined so that the best speakers can be obtained for our shareholders. For the 2014 event speakers discussed sprayer and planter section control, variable rate seeding, soil mapping, and using technology for on-farm research. Demonstrations of unmanned aerial vehicles (UAV) provided a display of their upcoming potential along with a discussion of their legal issues. In addition, agricultural equipment dealers from across the nation displayed their latest technology. Approximately 325 people attended this event in 2014. Up to 60% of attendees reported that they plant to implement the information they learned at the field day into their operation, with a 37% increase in knowledge. In paired sample correlations there were statistically significant increases in all following five knowledge areas; Drone, Unmanned Aerial Vehicle (UAV), Unmanned Aerial Systems (UAS) technologies (63% increase), Precision agriculture technologies (17% increase), Precision ag equipment (18% increase), Precision ag data accuracy and usage (23%) and Applications of UAV/UAS to crops or livestock management (63% increase).

MONTANA STATE UNIVERSITY EXTENSION RANGE MANAGEMENT INSTITUTE

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Rangeland comprises approximately 70% of the land area in Montana. Ranches with rangeland livestock production enterprises contribute significantly to Montana's economy and, when managed correctly, these landscapes can naturally maintain plant community health, soil integrity, water quality, and wildlife habitat. Therefore, it is important for Extension faculty to possess adequate knowledge to assist these individuals.

This program, funded by Western SARE, was initiated to provide in-depth training for Montana Extension faculty on fundamental rangeland ecology and management principles. The focus of the program is to aid educators in more effectively assisting landowners who desire to manage the rangelands they rely upon for their livelihood efficiently and sustainably.

Faculty attended three workshops that included classroom and field instruction. Topics included: 1) *Rangeland Ecology Principles*, 2) *Rangeland Management Principles*, 3) *Management Tools to Improve Efficiency*, 4) *Rangeland Metrics and Monitoring*, and 5) *Current and Emerging Issues on Rangelands*. Pre- and post-tests indicated that participants increased knowledge significantly across all workshops. Personal contact with participants also demonstrated increased confidence by participants when working with ranchers and local working groups focusing on rangeland resources.

In the future, project coordinators plan to lead the development of a strong mentoring program across Montana among field faculty who address rangeland resource clientele inquiries. Additionally, by participant request, project coordinators are developing a 'Level 2 Montana State University Extension Range Management Institute' workshop. Previous participants will be invited to attend this hands-on, field-oriented workshop designed to further elevate faculty knowledge of rangeland management tools and strategies.

NATURALLY ESCAROSA: PROMOTING ECOTOURISM AND AGRITOURISM IN NORTHWEST FLORIDA

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Escambia and Santa Rosa counties, located in the northwestern portion of Florida, have had successive setbacks to economic development by hurricanes Ivan and Dennis in 2004-2005, followed by the economic downturn of 2008 and

the 2010 oil spill. Local businesses, particularly those catering to vacationers and seasonal residents, suffered considerably due to actual and perceived damage from the oil spill. Extension agents pursued and were awarded a \$171,150 grant from the Gulf Tourism and Seafood Promotional Fund to relaunch “Naturally EscaRosa” (NER). The objective of the NER campaign was to highlight the many agritourism/ecotourism attractions the area offers and to increase visitors and visibility. The grant allowed for expansion of the NER website (<http://www.naturallyescarosa.com>) and brochure, fund printing and redistribution of the brochures, and design promotional banners and billboards, development of a smart phone application. In addition, the grant funded a 2-day conference, permanent marker signs to publicize individuals as part of the larger Naturally EscaRosa trail, printing of the promotional banners and brochures, hospitality industry networking sessions, and equipment for local Extension office use. NER has doubled from 48 locations in 2013 to 101 locations in 2014. The conference reached 75 people; a post-conference survey showed there was a 50% increase in knowledge of agritourism, ecotourism, and marketing campaigns. Twenty-four percent (24%) of these entrepreneurs have implemented marketing techniques learned at the conference. Website traffic has increased 62% when compared to the same time frame the year before. The program is being used as a model for statewide expansion.

NEBRASKA EXTENSION, SARE, NRCS AND PROGRESSIVE FARMERS COOPERATE TO PROVIDE EDUCATION AND EVALUATION OF COVER CROPS AND SOIL HEALTH

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Nebraska SARE, the University of Nebraska-Lincoln, NRCS, and progressive farmers are cooperating to provide education and evaluation of cover crops and soil health. Nebraska SARE has made cover crops and soil health education a primary initiative of its program since 2013. With soil health being a major focus of NRCS EQIP and CSP Programs, there is considerable interest among farmers on the use of cover crops and how they can improve soil health. Nebraska Extension has initiated on-farm research with cover crops, received funding from the Nebraska Corn and Soybean Boards to conduct

research on cover crops and has received internal funding from Extension to initiate soil health education and build a network of farmers, researchers and educators that are committed to learning about cover crops. Nebraska Extension has received a grant from NRCS to continue to evaluate cover crops and soil health under several different environments in Nebraska and provide educational opportunities for farmers, NRCS Staff and Extension Educators and Specialists across Nebraska. Nebraska Extension staff have conducted research addressing cover crop issues and potential as a forage in no-till systems and other different rotational cropping systems. Surveys have been conducted with educators and crop and livestock farmers across Nebraska to determine their needs. An Extension In-service Training was conducted to discuss current research projects and determine next steps to address this important topic. In 2013-14, 670 participants increased their knowledge of cover crops and soil health at SARE, Nebraska Extension and NRCS sponsored conferences, workshops and field days.

ON FARM SPOTTED WINGED DROSOPHILA FRUIT FLY TRAPPING IN NORTH FLORIDA STRAWBERRY PRODUCTION

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An invasive, exotic fruit fly has taken up residence in Bradford County, Florida. The fly, called spotted wing drosophila (SWD), *Drosophila suzukii* (Matsumura), is an invasive pest first reported in the United States in California in 2008 and in Hillsborough County, Florida in 2009. This pest has caused serious economic impacts with losses estimated as high as 40% for blueberries and 50% in strawberries. SWD infests most of the thin-skinned, small and stone fruits including strawberries and many wild plants like night shade and galberry. SWD is a definite threat to the economic sustainability of strawberry farmers because eggs hatch and maggots develop inside the berry rendering the fruit unmarketable. Working with researchers in the UF Small Fruits and Vegetable IPM Laboratory, the agent implemented a trapping program on six farms where the SWD population was monitored approximately every two weeks from February to April. Monitoring SWD with farmers provided the opportunity to familiarize farmers with the emerging SWD threat and to teach them how to use trapping to determine when it is appropriate to apply insecticides or implement cultural practices to minimize SWD colonization. Targeted farmers readily used information gained to manage SWD on their farms. An additional blueberry farmer who learned the trapping procedures from our Extension services communicated in an email, “Thanks for info about the SWD fly, everyone I know bought traps to set out and the info you sent shows how to make them so now I will make some and set out”.

PARTNERSHIPS PROVIDES 40 YEARS OF PLANT DIAGNOSTIC CLINIC TO THE NURSERY INDUSTRY

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The purpose for this educational program is to increase commercial horticulture industry members' knowledge and skills for efficient plant production and sustainable practices along with timely and accurate diagnosis of the problem. Program activities include a weekly plant diagnostic clinic conducted at the University of Florida Research Center in Apopka, FL. Area growers bring plant samples to the clinic and the Extension agent and a team of Extension research specialists will examine the sample. Teaching methods include a one on one conversation about growing methods which includes a list of pesticides used, fertilizers or other treatments applied, use of a hands lens or microscope, measuring soil pH and soil fertility, internet and publications resources. Plant samples brought into the clinic have been the topic of newsletter articles. Over 200 growers attended the plant diagnostic clinic in 2014. Producers participating in this program indicated the value of this program saved them up to \$100,000 a year and the value of the crops saved was up to \$300,000. Ninety-two per cent of them responded that information learned in the plant clinic has been used on the job. A grower brought Viburnum, the roots were not growing and were clubbed. It determined water samples should be tested for salt. An improper application of an herbicide was also determined. This company was facing \$150,000 in lost sales. The plant clinic provided timely and accurate diagnosis.

PESTICIDES AND WATER QUALITY PROGRAM

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Approximately 66 percent of Missouri residents are provided with potable water from a surface water source. Surface water that originates from rainfall runoff from row crop fields presents a risk of pesticide contamination if pesticide application is not properly managed. In an effort to increase the impact of research proven best management practices (BMPs) for atrazine use, a program was conducted that combined atrazine BMPs education with Missouri's Private Pesticide Applicator certification program. The goal of the program was to reduce atrazine runoff from Missouri farm fields by teaching research proven BMPs and informing growers of the benefits of investing time and money to implement BMPs. An end of class voluntary survey posed the question "Within the next 12 months will you increase your use of BMPs that will reduce pesticide runoff?" Of 268 total respondents 8% chose the response "no", 44% chose the response "maybe", 23% chose the response "yes", and 25% chose the response

"already using BMPs".

PILOT VOLUNTEER PROGRAM INCREASES ACCESS TO AND USE OF FRESH PRODUCE BY FOOD PANTRY CLIENTS IN HANCOCK COUNTY MAINE

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Maine is the most food insecure state in New England. Paradoxically, almost two-thirds of adults and a quarter of school-aged youth are overweight or obese. When finances are tight, families purchase inexpensive, less nutritious, high calorie foods at grocers, and turn to emergency food distribution sites. Over five years, Hancock County Master Gardeners have grown and donated 15,000 pounds of produce to food pantries. Some pantries couldn't distribute all of the produce because recipients lacked knowledge about how to use it, and pantry volunteers didn't have time or expertise to encourage fresh produce consumption. To help recipients become more comfortable using fresh produce when preparing meals, UMaine Extension piloted the Eat Well Volunteers (EWV) program in Hancock County (2014). EWVs underwent training in basic nutrition, food safety, cooking & preserving fresh produce, and cultural sensitivity. Once trained, EWVs conducted hands-on lessons at food pantries with emergency food recipients. By combining the produce generated by Master Gardeners with food preparation lessons offered by EWVs, we equipped food pantry clients with the supplies and skills needed to feed their families healthier foods. Seven randomly selected food pantry clients took weekly surveys after EWV food preparation lessons. Short-term results:

- 100% used all of the produce provided to them.
- 71.4% reported that the recipe provided helped them use the produce received.
- 71.4% reported that the demonstration (cooking, washing or freezing produce) helped them use the produce received.
- 85.7% reported that the taste test provided at the food pantry helped them use the produce received.

PUTTING PASTURE WEED CONTROL RECOMMENDATIONS INTO ACTION

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Managing pasture weeds is one of the biggest struggles facing livestock and pasture producers in Fulton County, Arkansas. A variety of methods were used to educate producers on the benefits, both in forage quality and quantity, of controlling undesirable weeds in grass pasture systems. Demonstration plots included an early season thistle control demonstration containing 2 different herbicide treatments, a mullein control spot spraying weed demonstration, and a late summer brush control demonstration when dry conditions typically limit spray application options. Other means of educating producers included quarterly newsletters with information concerning herbicide recommendations, sprayer calibration, and demonstration results. Articles in the local newspaper with timely pasture spraying information reached even more producers. Through these methods, coupled with numerous phone calls and one on one consultations, the pasture weed control program in Fulton County reaches a large majority of producers in the county. Of the 753 farms in the county, the agriculture newsletter reaches 204 of those, and the newspaper articles are published in 2 newspapers that print over 4000 copies and have over 1800 subscribers. Several county clientele have mentioned how beneficial and pertinent the information in the news articles have been. The Fulton County Extension Office is well-known among county producers as the place to go for timely, accurate weed control recommendations.

REGIONAL YOUTH LIVESTOCK FIELD DAYS: A SUCCESSFUL EXTENSION MODEL EDUCATING YOUTH AND ADULTS FROM MULTIPLE COUNTIES AND STATES

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With an estimated 60% of the 4-H members in Southeastern Washington and Northern Idaho enrolled in livestock market projects, there is a need to provide hands-on education to both youth and adult leaders on how to successfully raise and market livestock from "Farm to Plate". With only 5 Extension faculty with 4-H livestock responsibilities in this 15-county area, the regional model was adopted as an effective method to deliver high quality educational programming. Since 2004, Asotin, Whitman and Nez Perce County Extension Offices have offered one-day regional field days attended by over 1500 youth and adults. These programs provide the latest research-based information on selection, nutrition, quality assurance, healthcare, and showmanship techniques.

Presenters include Extension faculty/staff; local veterinarians;

successful producers; feed representatives; and students with knowledge of beef, sheep, swine and goats. This regional model addresses unmet needs at the county-level, while efficiently utilizing the time of Extension faculty and staff. As field day attendance has increased, programs were modified to include additional speakers and group rotations; dividing participants by level of experience; and adjusting schedules to offer the most popular field days annually. In 2014, 100% of participants increased their level of knowledge of how to care for, feed, handle and show their livestock. Over 90% indicated that they would immediately apply what they learned; and 72% had attended a previous field day.

As a result of the field day model, participants from a large geographical area have been able to access high-quality training at an affordable price.

REGISTRATION FOR RECEIVING GOVERNMENT PAYMENTS - SYSTEM FOR AWARD MANAGEMENT (SAM)

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Until recently, farmers receiving government payment from USDA agencies traditionally received a written check. In some cases, individual agencies had established electronic funds transfer (EFT) within its own system. In 2012 the Federal Government began merging several of its financial databases into one known as SAM (System for Award Management). This was to streamline registration for businesses and to increase the transparency of the Federal Government's spending. In the spring of 2014 farmers were incorporated into the definition of rural businesses and landowners, now requiring them to be registered in SAM to receive federal government payments by EFT. The EFT's established by individual USDA agencies were no longer valid. Registering in SAM can be very frustrating and time consuming. Farmers were seeking assistance from the Cooperative Extension Service to get registered in SAM. To assist them in navigating the SAM registration process, this publication was developed by the author to help explain SAM along with a worksheet of all the necessary information for a successful registration. Over 250 copies were printed at our print shop and have been distributed across Arkansas by county offices. It was placed on our website for anyone wishing to download the publication at <http://www.uaex.edu/publications/PDF/FSCED201.pdf>. In December 2014, this publication was the basis for a pilot computer lab workshop where farmers could come to the lab and do the initial SAM registration with qualified personnel for assistance. Seventeen farmers attended this initial pilot workshop. Other workshops are being planned.

SPRING RANCHERS FORUM AND TOXIC PLANT EDUCATION

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—The Spring Ranchers Forum (SRF), a 16 year field day provides cutting edge/current issues research based education concerning forages and natural resources. Part of a six-county comprehensive educational program, the target audiences of the SRF are individual and multiple species livestock producers. With varied livestock species production and natural resources, agendas needed to provide engagement topics for diverse agricultural groups. Location, meal and fellowship were determined essential to drawing together the diverse audience annually. Held annually at Yarborough Ranch, it is the largest UF Extension/private ranch field day. Objective: To provide livestock producers the best possible research based education - emphasis teaching on forage management, animal husbandry, and toxic plant education for knowledge gain and economic return. Method: UF specialists / professors speaking with live demonstrations in cowpens in the morning and County Extension Agents teaching on related topics in an open pavilion in the afternoon. This format provides UF Specialists exposure while providing County Agent familiarity as the “go-to” local contact in a social setting conducive to discussion. Participants, post survey indicated that 90% improved animal science skills and 85% shared those skills with other ranchers. Sixty-two (62%) percent of the 2013 survey claimed economic gain as a result of attending the forum and experienced direct savings of \$443,543.00. Producers also reported the saving of \$404,000.00 worth of livestock as they successfully identified poisonous plants following the three year concerted effort.

STORMWATER MANAGEMENT AND RESTORATION TRACKER (SMART) TOOL

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Stormwater runoff from private properties remains one of the most difficult and expensive sources of Chesapeake Bay pollution to control. Small-scale, residential stormwater best management practices (BMPs) are most often voluntarily installed by property owners but are rarely effectively tracked at the local level by county and/or municipal agencies. Therefore under the current regional TMDL situation, where practices must be counted and tracked to receive credit, there is no incentive for the investment in these BMPs. In 2013, University of Maryland Sea Grant Extension Watershed Protection and Restoration Program developed the Stormwater Management and Restoration Tracker (SMART). SMART is an interactive crowd-sourced mapping and tracking tool that provides a credible and certifiable way to account for 11 small-scale practices that can be implemented by property owners. The tool allows individuals to upload their BMP data to a local website, where the data are tracked, checked and certified by trained volunteers. SMART incorporates nutrient and sediment reduction information to calculate and report individual and aggregate reductions for each BMP tracked, this provides for a formal accounting for local TMDL/Phase II WIP, NPDES and MS4 permit requirements and could potentially result in considerable quantifiable cost-savings for local governments. During the 2014 pilot year, private landowners in Maryland reported over 400 BMPs, that prevented over 40lbs of nitrogen and 2lbs of phosphorous and sediment from entering local waterways.

STRENGTHENING LOCAL GRAZING PROGRAMS BY USING A REGIONAL APPROACH

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Extension Agricultural Educators in southeastern Ohio offer grazing meetings in their counties. The Eastern Agriculture Research Station, part of Ohio State University's Ohio Agricultural Research and Development Center, makes a prime location to hold grazing educational events and is centrally

located in the region. Space for research plots and equipment to implement practices are made available to Educators by the farm's manager. In 2014, local Agricultural Educators decided to promote individual county grazing programs as a regional set of meetings. The final meeting of the year was a combined meeting near the end of the growing season to look at several grazing management practices. Session included: Watering systems, weed control using four herbicides, inter-seeding oats and legumes, stockpiled forage plots comparing nitrogen application with and without Agrotain® N stabilizer, hands-on hay sample evaluation with laboratory analysis, follow-up, and a fence building demonstration highlighting how to build braces correctly. Sixty-four percent of the 30 participants returned program evaluations with 100% stating they learned new information at this grazing meeting that they did not know previously. Every respondent (100%) believed the information discussed would be beneficial to their farming operation. Survey respondents owned 955 head of beef, 100 head of sheep, 10 horses and managed 2,423 acres of land. A few participant comments were: "Great program"; "Hands-on like this is best"; "Great job"; "Great meeting"; "Good information"; "Good to use the research farm". Because of the successful 2014 program, another regional grazing meeting is scheduled for October 24, 2015.

SUPER COW SUMMER SERIES

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As agents we need to think outside of the box on how to reach our producers and how to fit our education programs into their busy schedule. Many of my cattle producers work off the farm or are busy with chicken houses and it is very hard for them to spend more than a couple of hours away from the farm. The Super Cow Summer Series was designed to have one and half to 2 hour sessions that would be hands-on and lecture. The series were scheduled to run the last Thursday of each month May-October. The program covered Animal Handling, Beef Quality Assurance, Low Input Beef production, Grass Fed Beef, Improving Hay Quality from the Ground up, Understanding a Hay Analysis and how to use it and the Value of a Mineral. A total of 40 producers attended the Super Cow Summer series. Eighty-six percent (86%) attended two more or more sessions of the series. One hundred percent (100%) plan to implement 2 or more strategies they learned about at the series. Fifty-seven percent (57%) indicated they learned more about cattle nutrient requirements and how to feed cattle based hay results by attending the Super Cow Summer Series.

TEACHING GROWERS ABOUT HERBICIDE DAMAGE IN HORTICULTURAL CROPS

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Unlabeled herbicides can cause significant damage to horticultural crops that are accidentally exposed to them. Traditionally, problems were encountered from off-target drift from nearby fields undergoing herbicide application. Additionally, damage now is being observed from compost and manure that has been contaminated with new-generation herbicides that are labeled for use on pastures and forage crops. These herbicides have the ability to pass through the alimentary canal of farm animals and still remain active. As a result, they still are present in the animal's manure and can cause substantial damage to sensitive crops when the manure is used for soil improvement or as a component of compost. Damage has similarly been observed in soil brought into greenhouses from fields where these herbicides have been applied. Also noted is damage from irrigation water contaminated with herbicides that the growers have used on their own land to control woody species. When growers experience problems with herbicide damage on their crops, we find our time spent identifying what caused the injury, and then educating the growers on how to recognize the damage and avoid it in the future.

THE DEVELOPMENT AND MAINTENANCE OF A LOCAL FARMERS MARKET

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The Dandridge Farmer's Market has been a successful local effort in delivering local foods to local consumers. The market began in 2008 and has continued to increase both vendors and revenue each year. The market has grown from just over \$15,000 in sales to \$47,686 in 2014. The success of the market can be attributed to a core group of local volunteers, consistent leadership, and a written set of rules and regulations. The market has been held at a city owned parking lot in Downtown Dandridge, TN underneath tents, but plans have been made to build a permanent pavilion that will benefit both the market and the Town of Dandridge.

The Farmer's Market has also lead to a great number of educational opportunities for both vendors and consumers alike. In conjunction with the market demonstrations and activities have been done with beekeeping for both children and adults, and growing pumpkins with children. The market also has several meetings a year which have served as both organizational and educational meetings addressing topics such as safety and marketing. In 2014, an organic vegetable producer's monthly meeting was also started and addressed topics such as variety selection, soil health, and weed control.

THE VALUE OF 4-H JUDGING TEAMS – MISSOURI DAIRY JUDGING ALUMNI SURVEY

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4-H dairy judging teams are widely considered to be an effective means of educating youth in animal evaluation and also for the development of valuable life skills. The expense associated with maintaining a state judging team, however, is being challenged across the United States due to tightening budgets and the perceived small number of students impacted by the program. In addition, as public funds for such activities decline, more support from the private sector is needed. Justification for judging programs has been editorialized in the popular press, but little research has focused on judging team value beyond life skill development. In 2013, a survey was sent to former Missouri 4-H Dairy Judging Team members, asking them about life skill development and the value of the judging team experience. Results of the survey indicate judging team experience is highly influential in the development of communication, public speaking, and presentation skills. Respondents also indicated judging team experience was valuable in introducing them to opportunities in agriculture, the dairy industry, educationally, and professionally. Eighty-four percent currently use their evaluation and decision making skills both professionally and personally. One hundred percent of respondents indicated judging activity benefits outweigh the costs associated with them.

TWITTER FOR CROP PRODUCTION

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Twitter is an effective social media for crop production and crop protection education. Pictures of crop development, pest problems and weather related crop damage can be posted on a Twitter account during the growing season. Crop related content can be added during the winter season on relevant crop issues. Topics of interest can be posted and supporting information can be linked using technology that shortens web addresses. Twitter postings can also be used as supportive information for educational presentations during the winter meeting season.

Twitter postings also allow you to make real time observations of developing issues. This social media allows you to develop a conversation with other agronomy colleagues regarding a timely topic. One example was an observation of an alleged Palmer pigweed population. The conversation that followed confirmed that the population was common waterhemp. However, a number of useful on-line references were used to identify the weeds posted on Twitter.

Twitter represents an opportunity to connect with a younger

audience. This is an important audience that does not always use research based information.

UPDATING AND PROMOTING THE NATURALLY ESCAROSA WEBSITE TO FURTHER AGRITOURISM/ECOTOURISM IN NORTHWEST FLORIDA

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Escambia and Santa Rosa counties, located in the northwestern portion of Florida, have had successive setbacks to economic development by hurricanes Ivan and Dennis in 2004-2005, followed by the economic downturn of 2008 and the 2010 oil spill. Local businesses, particularly those catering to vacationers and seasonal residents, suffered considerably due to actual and perceived damage from the oil spill. Extension Agents, tourism development staff, and business owners partnered to redesign a website and create a software application and marketing campaign called “Naturally EscaRosa”. The objective was to highlight the many agritourism/ecotourism attractions the area offers. The <http://www.naturallyescarosa.com> website (re-launched 2014) and app (available Spring 2015) are broken into six categories with photos and a searchable database of 101 agritourism/ecotourism businesses. Target audience includes hospitality/tourism industry professionals, tourists, and local residents. Significant effort was put into training the industry professionals in the content and use of the website, enabling visitors to use it as a central source of information. Since the updated website was launched in 2014, website traffic has increased 62% when compared to the same time frame the year before. The agents involved gathered information for the website by contacting each business to develop subject matter. Professional photographs were taken of each location to provide visually appealing graphic content. Website design was provided by the graphic artists at UF/IFAS Information and Communication Services. The website has been promoted through a wide-ranging marketing campaign including indoor and outdoor billboards, promotional giveaways, and kiosks at festival and professional athletic venues.

URBAN YOUTH EXPERIENCE ARKANSAS AGRICULTURE

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Happy Hollow Elementary School in Fayetteville, Arkansas is built on the site of a farm made famous in a 1908 Saturday Evening Post article along with a book of the same name, both detailing William R. Lighton's trials and successes of homesteading. With a strictly urban/suburban population, most students have no experience with agriculture whatsoever. During the past two years, a Harvest Festival has educated urban youth about farming in the Ozarks and highlighted the school site's rich agricultural tradition. Extension has partnered with community organizations to staff hands-on activities for kids to learn about crops, soils, poultry and beef production, gardening, pollination, nutrition, water use and more. Partners included the local farm Bureau Women's Committee, University of Arkansas (UA) Mullins Library Special Collections, Washington Co. Master Gardeners/Jr. Master Gardeners, Washington Co. 4-H, UA Crop, Soil and Environmental Science Club, UA Poultry Science Club, Beaver Watershed Alliance, Apple Seeds Northwest Arkansas, Feed Fayetteville, Fayetteville Public Schools' Sustainability Initiative/Food Corp volunteers, Shiloh Museum of Ozark History, Heifer International, Beaver Water District and the Botanical Garden of the Ozarks. Kids filled out passports with a question referring to a key topic that they learned by completing the activity while visiting each booth. Youth and parents loved the experiential learning exercises such as guess soil texture by feel, making newspaper pots, matching seeds to crops and agricultural products, and making fruit/vegetable "Eat the Rainbow" collages from pictures in seed catalogues while community partners appreciated the teaching interaction with nearly 250 kids.

USING GIS TECHNOLOGY IN 4-H CLUBS

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The purpose of 4-H GIS education program was to increase Science and Technology Skills for 4-H members in Union County, Tennessee. I accomplished this task by writing a grant to obtain ESRI Arc Map Software, creating community partnerships with the Chamber of Commerce and Tennessee State Park Rangers, and engaging 4-H members with hands on learning experiences. Our first project was to hike thirteen miles of walking trails at Big Ridge State Park to obtain trail data. This data was converted into shape files to create the map in ESRI's Arc Map. This map won the Tennessee State 4-H GIS Contest, which awarded flight and hotel accommodations

to the International ESRI Education and USER conference in San Deigo, California for four 4-H members, from two counties with high poverty rates and myself as a chaperone. We hosted a 4-H booth and presented at the Map Gallery. This map placed third in the National Youth GIS contest. As a result of the experiences, 100% of the youth involved in this project can create a display to communicate scientific data, use data to create a graph for presentation, and use science terms to share scientific results. Participation in this project helped students gained valuable life educational life experiences.

USING YOUTUBE VIDEOS IN EXTENSION EDUCATION

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An ever growing challenge for extension educators is determining the best method to present educational programs. Traditional methods such as producer meetings are becoming less effective and poorly attended. Producers find it difficult to attend meetings due to other time constraints and younger clientele don't want to attend a meeting to learn about production agriculture.

One solution to this problem is to use educational videos posted to enterprise specific channels on YouTube. By using YouTube producers can view these educational videos on their own time and find the information that fits their needs. In 2013, OSU created the OSU Meat Goat channel with 25 videos covering a wide variety of topics related to meat goat production. Since the launch date in November 2013 these videos have been viewed by over 290,000 people in 207 countries.

Using YouTube analytics we can determine that 64% of the producers that viewed these videos are from the U.S. with the top five state being Texas, California, Florida, Georgia and North Carolina. The top five videos deal with the issues of hoof trimming, fencing, castration, housing and how to give injections.

The success of these videos has encouraged OSU to create other YouTube channels and videos for other agricultural production areas. In 2015 OSU plans the launch of the OSU Cattle and Forages channel. This channel will have videos covering issues facing cattle and forage production.

VEGETABLE GRAFTING FOR HOME AND MARKET GROWERS

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Heirloom vegetables are very popular in home and market gardens but growers struggle with low production, split fruit, and disease problems. Grafting is a way to increase production, produce better quality fruit, and increase disease resistance. Most people do not realize that vegetables can be grafted like fruit trees and for the same reasons. Grafted vegetable plants, tomatoes in particular, are readily available in seed catalogs but a lot of people are not willing to pay the high costs. Over the past 4 years, extension specialists have offered hands-on classes to teach the basics of grafting tomatoes and cucurbits. Small scale healing chambers and aftercare are keys to a successful graft union on a small scale. This process gives home and market growers options for improved fruit and disease resistance. In addition, by using grafted vegetables, market growers can sell a value added product and offer heirloom vegetables. Through the various classes, approximately 400 participants from four states and three foreign countries were taught the basics on the benefits, process, and care of grafted tomatoes and cucurbits before they attempted the hands on portion on the class. Success rates of living grafted plants varied from 25% to 90% for the individuals. The success rate of the grafts improved based on changes made to reflect information from workshop evaluations. Size of the plants and timing made an impact on success rates also.

WOMEN IN AG, EDUCATIONAL SERIES IN FARM MANAGEMENT

Larson, K.¹; Reid, R.²

¹District Extension Agent, K-State Research And Extension, Concordia, KS, 66901

²Extension Associate, Agriculture Economics, K-State Research And Extension, Manhattan, KS, 66506

The share of U.S. farms operated by women nearly tripled over the past three decades, from 5 percent in 1978 to 13.7 percent by 2012, according to USDA's "Characteristics of Women Farm Operators and Their Farms". Since 2012, the trend is certainly continuing. Whether it be from inheriting farm ground, continuing the family operation, marrying into a farm family, or a host of other reasons, women find themselves in a position that requires knowledge of managing a farm operation with little background experience or training to do so.

The Women in Agriculture educational series is designed to provide information and training on a wide variety of farm management topics that are catered directly to farm women. Participants are provided a comfortable environment where they feel free to ask questions and learn critical skills. Women with any level of experience in farm management or with any degree of farm involvement are invited to attend; there is something for everyone to learn. Changing the profitability of their operations has the potential for increased vitality of this agricultural-based area as well as more sustainable food production in Kansas.

YAVAPAI COUNTY NATIVE AND NATURALIZED PLANTS: AN INTERNET PLANT IDENTIFICATION RESOURCE

Schalau, J.¹; Sue Smith²; Doug Tolleson³

¹Agent, Agriculture and Natural Resources, University of Arizona Cooperative Extension, Prescott, AZ, 86305

²Yavapai County Master Gardener, University of Arizona Cooperative Extension, Prescott, AZ, 86305

³Associate Range Management Specialist, University of Arizona Cooperative Extension, Camp Verde, AZ, 86322

Yavapai County Native and Naturalized Plants (YCNPNP, <http://cals.arizona.edu/yavapaiplants>) is a web-based plant database designed to assist everyday people in identifying native and naturalized plants of the central highlands transition zone in north central Arizona. The website uses non-technical language and features multiple photographs of each plant showing key characteristics and seasonal differences in appearance. The YCNPNP search function provides users a variety of searchable fields. Known data field information is entered and results return a series of thumbnail photos to help narrow the search. Detailed descriptions of each plant are also included. At its launch in 2010, the YCNPNP website had 75 plants and over 100 photos. In March 2015, the YCNPNP database included 564 plants and 2,390 photos (13 cacti, 351 forbs, 76 grasses, 65 shrubs, 50 trees, 6 succulents, and 3 vines). Yavapai County Master Gardener volunteer, native plant enthusiast, Sue Smith, is a retired web programmer and leads this project. Sixteen other Master Gardener volunteers and professionals have contributed photographs and entered plant descriptions. The website is used by multiple educational institutions, agencies, and non-profit organizations and received 74,960 pageviews and 9,101 users in 2014 (Google Analytics). University of Arizona Range Management Specialist, Doug Tolleson, also supported the YCNPNP database and uses it with range management practitioners. Yavapai County Master Gardeners continue adding photos and descriptions to the YCNPNP database. The YCNPNP database serves many audiences and is used widely across Northern Arizona and in adjacent states.



Award Winners

2015 NACAA

100th

Annual Meeting

and

Professional Improvement Conference

Sioux Falls, South Dakota

Agriculture Awareness and Appreciation Award

National Winner

WARREN COUNTY AGRICULTURE AWARENESS

Coles, J.*¹

¹ County Extension Agent for Agriculture and Natural Resources, UK Cooperative Extension Service, Bowling Green, KY, 42101

The Warren County Agriculture Advisory Council identified agriculture awareness the number one program priority. As the population gets further removed from the farm, it is essential to teach agriculture awareness to ensure the general population understands the importance of agriculture and is more likely to support agricultural endeavors. The ag council and extension agent outlined goals, which include: 1) to increase media exposure through at least a monthly presence on one media outlet featuring agriculture events, promotions, and agriculture education, 2) increase attendance at agriculture awareness events, 3) get more farmers involved in the planning and implementation of ag awareness promotions and events 4) increase awareness of farm to table connections with promotion of local food and farmers over the next two years.

Agriculture awareness through media exposure included the agriculture agent hosting a 30 minute weekly radio show, a daily 30 minute television program on a local cable channel, a 5 minute daily television segment on the ABC affiliate and being a guest on a 5-8 minute monthly television segment on local network affiliates. An agriculture awareness breakfast and a farm to table local foods campaign enhanced the ag awareness effort.

All of these components have contributed to an increase in agriculture awareness with the general public and targeted youth. Featured farmers have realized a 10-30% increased sales because of media campaigns. With consistent work toward sharing agriculture's story, I am confident that we will continue to make great strides in promoting the importance of agriculture.

National Finalists

CULTIVATING PLANTS AND MINDS

Behnken, T.J.*¹, Brison, C.*²

¹ Extension Educator, Nebraska Extension, Fremont, NE, 68025

² Extension Educator, Nebraska Extension, Omaha, NE, 68124

This farm to school program evolved as a result of a newly established plant science program in a local elementary school (K-6 students). This new plant science program was named

“Cultivating Plants & Minds” and was created by a local Extension Educator who provides support to the school. The program outcomes focused on (1) Youth will know where their food comes from; (2) Youth will develop positive attitudes and interests regarding local agriculture; and (3) Youth will utilize scientific principles as they apply to plant science (agriculture). While it was easy to observe the students utilizing scientific principles during visits to the plant science lab, it was much harder to identify their increased knowledge of where their food comes from. With a core team of teachers, local Extension Educators developed the “Where does your food come from” program. The program consists of student assemblies teaching students where their lunch (from that day) originated. During the assemblies, the Extension Educators discussed each lunch and snack item – tracing their origins back to the farm and providing its connection to Nebraska agriculture. As a result of a pre- and post-survey; the K-1st graders had an average increase in knowledge of 15%, the 2-3 graders demonstrated as much as 47% more students answering correctly and the 4-6 graders showed as high as 49% more students answering correctly.

DAIRY DAYS: FARMERS TEACHING STUDENTS ABOUT COWS AND MILK

Fredricks, G.*¹

¹ County Director, WSU Extension, Kelso, WA, 98626

Dairy Day is a program enabling school students (K-4) to learn about farm animals, the care that they receive and the products that they produce. Offered annually in Clark and Lewis Counties, it provides a guided tour for students to learn from farmers about farming. Youth today are disconnected from knowing that food is produced on the farm. They think it comes from a store and don't understand the importance of farming. At Dairy Days, students learn from the farmer how healthy food is produced and the care farmers put into raising livestock in a stress free environment. Started in 1992, there has been 57,555 students, teachers and parents that have attended Dairy Days. Students not only hear about farming, but are able experience it. They touch a baby calf and feeds that a cow eats, are able to see a cow being milked, and can taste dairy products. Surveys have shown that following the tour, youth increase their understanding that farms product safe and healthy food and animals are cared for in a stress free environment. A large number of volunteers are needed to hold this activity. The program is supported by the Clark and Lewis County Dairy Women, Clark and Lewis County Dairy Federation, Clark and Lewis County Fair, and the Washington Dairy Products Commission.

State Winners

JOHNSON COUNTY AG AWARENESS

Miller, R.*¹

¹ County Extension Agent, ANR, K-State Research & Extension, Olathe, KS, 66061

Johnson County is part of the metro Kansas City area and the most populated county in Kansas with over a half million residents. With our urban neighbors close by, agriculture has both its challenges and opportunities including helping people understand where their food comes from and the variety of ways it can be produced. With a broad objective of “helping people reconnect with agriculture,” our Ag awareness program is a series of planned educational efforts including key events like Slice of Ag and Touch-A-Truck, a free soil testing program, a dedicated effort to use our media outlets, a renewing and expansion of community relationships, and revenue generation. The cumulative effect of our Ag awareness efforts in the last year has given us the opportunity to reach 3.3 million people and generate \$71,000 in support of these efforts. Teachers, families, media and other participants are learning to understand and appreciate the role of agriculture in Johnson County.

NATURALLY ESCAROSA: PROMOTING ECOTOURISM AND AGRITOURISM IN NORTHWEST FLORIDA

Johnson, L.*¹, Thaxton, B.*², Stevenson, C.T.*³, O'Connor, R.*⁴, Verlinde, C.*⁵

¹ EXT AGT II, AGRICULTURE, , Cantonment, FL, 32533

² Commercial Horticulture Agent, UF/IFAS Extension Santa Rosa County, Milton, FL, 32570

³ Coastal Sustainability Agent, UF/IFAS Extension Escambia County, Cantonment, FL, 32533

⁴ Sea Grant Agent, UF/IFAS Extension Escambia County, Cantonment, FL, 32533

⁵ Sea Grant Agent, UF/IFAS Extension Santa Rosa County, Milton, FL, 32570

Escambia and Santa Rosa counties, located in the northwestern portion of Florida, have had successive setbacks to economic development by hurricanes Ivan and Dennis in 2004-2005, followed by the economic downturn of 2008 and the oil spill of 2010. Local businesses, particularly those catering to vacationers and seasonal residents, suffered considerably due to actual and perceived damage from the oil spill. Extension agents pursued and were awarded a \$171,150 grant from the Gulf Tourism and Seafood Promotional Fund to relaunch “Naturally EscaRosa” (NER). The objective of the NER campaign was to highlight the many agritourism/ecotourism attractions the area offers and to increase visitors and visibility. The grant allowed for expansion of the NER website (<http://www.naturallyescarosa.com>) and brochure, fund printing and redistribution of the brochures, and design promotional

banners and billboards, development of a smart phone application. In addition, the grant funded a 2-day conference, permanent marker signs to publicize individuals as part of the larger Naturally EscaRosa trail, printing of the promotional banners and brochures, hospitality industry networking sessions, and equipment for local Extension office use. NER has doubled from 48 locations in 2013 to 101 locations in 2014. The conference reached 75 people; a post-conference survey showed there was a 50% increase in knowledge of agritourism, ecotourism, and marketing campaigns. Twenty-four percent (24%) of these entrepreneurs have implemented marketing techniques learned at the conference. Website traffic has increased 62% when compared to the same time frame the year before. The program is being used as a model for statewide expansion.

BRINGING AG BACK TO THE NORTH GEORGIA AG FAIR

Jackson, B.L.*¹

¹ County Extension Coordinator, University of Georgia, Dalton, GA, 30722

Whitfield County, Georgia is ranked 67 of 159 counties in Total Farm Gate Value but has recently grown distant from their agricultural roots. Because many residents do not realize how agriculture impacts their everyday lives, the North Georgia Agriculture Fair board of directors gave the ANR Agent the objective of increasing awareness of the agriculture’s importance by demonstrating to the community how agriculture influences the lives of all. The public relations plan had three phases: updated informational banners, an extensive livestock display and an Ag Expo poster competition. Based on ticket sales, over 30,000 residents were reached by all education and demonstration aspects. Specifically, over 500 students were exposed at some level to the Ag Expo poster competition with 81 total entries and 45 completed posters on display from three of the four local high schools. Based on comments from the Fair board of directors, teachers and residents, the total public relations plan was a success with plans to expand the Ag Expo poster competition to double the current size for the future. Various community leaders favorable comments were: “I did not realize there was still so much farming done in Whitfield County;” “The banners were easy to read and I appreciate that they presented information that was unknown to the majority of the community;” and, “...the poster contest was a great educational opportunity and got a lot of youth thinking about various ag topics.”

AG ISSUES DETERMINED AND DEVELOPED BY YOUNG LEADERS

Blevins, M.*¹, Conrad, Tiffanee*², Morgan, Jessica*³, Xiong, Der*⁴

¹ County Extension Director, NC Cooperative Extension, Bolivia, NC, 28422

² Agricultural Agent, NC Cooperative Extension, Rockingham, NC, 28379

³ Agricultural Agent, NC Cooperative Extension, Wadesboro, NC, 28170

⁴ Agricultural Agent, NC Cooperative Extension, Hickory, NC, 28601

Participants in the North Carolina Agricultural Leadership Development Program identified key issues affecting agriculture in the state to present to legislators in Washington, D.C. in February, 2015. The issues selected were determined by the entire group of 35, then evenly distributed to teams for refining the topic and developing action items for decision-makers.

The issues included the **Affordable Care Act**; Providing Our Farmers Skilled, Legal, Long-Term Migrant Labor Options; **Changing Public Perception of the Agricultural Industry**; **Redefining Waters of the US**; **Agricultural Research Funding**; and the Importance of Infrastructure Improvements in North Carolina Ports.

The issue teams with Ag Agent involvement are in bold text above. All issue papers are included in the link.

The NC ALDP selects three dozen agricultural leaders from across the state to challenge and support these individuals to grow into the leaders of the agriculture industry. Participants make up a cross section of agriculture and include early to mid career agriculturists in crop production, industry, government, and Extension. Two years of monthly, week-long sessions in the off season are invested in these leaders to change their own operations and their communities as well as to contribute to the agricultural industry as a whole. Mastering one's self, Mastering Relationships and Understanding national and global issues are major tenants of this program.

This is but a glimpse at what happens in the program since these issues were discussed with national representatives and senators for North Carolina and were brought back home to share with local interested parties.

COMMUNITY AGRICULTURAL AWARENESS THROUGH THE AGRICULTURAL BUSINESS COUNCIL

Kimbrow, C.C.*¹

¹ EXTENSION AGENT III, The University of Tennessee Extension, Coalmont, TN, 37313

The Grundy County Agricultural (Ag.) Business Council is composed of local farmers, landowners, and leaders of county, state, and federal agriculture related organizations and agencies. The purpose of the Ag. Business Council is to keep the general public up to date on the current agriculture related issues of the county and state. The council has three main goals each year: 1) Educate the youth of our county on agriculture topics 2) Maintain an outdoor classroom for agriculture educational usage 3) Recognize the hard work and dedication of our local farmers each year. The Ag. Business Council is one of the longest standing community based organizations in Grundy County. The council meets once each month at a centralized location. There is no dues or membership fees and everyone

that comes volunteers to participate. Currently there is about 35 participants of the Ag. Business Council. As a result of this longstanding organization, local government officials, community based organizations, the local school system, and local citizens recognize the Ag. Business Council as the authority on agricultural issues and subject matter. Often times these groups will come to the council for advice or recommendations when faced with an agriculture topic or issue. The Ag. Business Council also assists sister agriculture agencies in planning, organizing, and implementing an annual Farm Education Day that strives to pull the entire county together so that both youth and adults have an opportunity to gain knowledge about what agriculture is and how it affects their lives.

CENTRAL VIRGINIA AG SPOTLIGHT AGRICULTURAL AWARENESS

Siegle, L.*¹

¹ Extension Agent, Virginia Cooperative Extension, Amelia, VA, 23002

Consumers are increasingly concerned with agricultural issues such as animal welfare and food safety but have limited opportunities to engage with producers. The "Central Virginia Ag Spotlight" blog was created to serve as educational outreach to consumers and producers. Each blog story features a farm in the region that utilizes best management practices, identifies creative solutions for production and marketing challenges, or produces unique agricultural products. The blog serves as an agricultural literacy outreach effort to non-farming consumers and an educational resource for producers. Stories are written bi-weekly or monthly and the links are shared via social media, Extension webpages, and newsletters. The blog's reach is tracked with Google Analytics. Between its inception in July of 2013 and March 1 of 2015, 29 farm stories have been posted on the blog and the site has received 15,600 page views by 7,050 visitors from 43 countries. Several local producers explored the idea of diversifying as a result of reading the blog and several people commented that they read the blog regularly for ideas. The blog received eleven reader comments in 2014 and several emails from readers directly seeking follow-up information, farm contact information, or farm tours. Facebook statuses with links to blog stories garnered dozens of engagements by consumers. Several dozen client calls and emails were a direct result of readers encountering the page. One blog story was reblogged on the Farm Credit Knowledge Center blog and three were featured in the *Virginia Cattleman*. Blog URL: <http://blogs.ext.vt.edu/central-virginia-ag-spotlight/>

DO YOU KNOW YOUR NMSU COOPERATIVE EXTENSION SERVICE?

Marez, L.A.*¹

¹ AG AGENT / COUNTY DIRECTOR, NMSU, Santa Rosa, NM, 88435

In a period where the NMSU Cooperative Service and County Extension Offices struggle to survive budget-cuts and justify the need for the Cooperative Extension Service programming, County Agents need to be ‘showcasing’ their efforts and the effectiveness of CES programming. County Extension programming is developed to ‘meet the needs’ of County constituents in helping them problem solve pertinent issues related to agriculture productiveness and profitability; developing youth; promoting healthy individual and family life styles; assisting communities with economic development, etc. Agents continually develop innovative programming that meet community needs, yet do not typically promote the success of their programming enough to public funding and administration entities. Efforts in this area would help to justify the need for the Cooperative Extension Service and support its’ longevity. This awareness booklet offers a ‘glimpse of County Agent work across New Mexico’, highlighting unique projects that Agents are developing and implementing in their own counties. This was a pilot project during 2013-2014 where Agents across New Mexico were asked to submit a brief outline, supported by photos, that would highlight: one innovative project, why it was needed and the impact. These one/two page reports were then compiled and placed into a bound document to be distributed to: Legislative entities at the 2014 NM Legislature; County Commissions and Support Councils; and NMSU College Administrators and Directors. Twenty-five Agents from Thirty-three NM counties participated in this pilot project. Agents and administration view the document positively.

Excellence in 4-H Programming National Winner

NEBRASKA EXTENSION SPECIAL GARDEN PROJECT 2015

Killinger, E.M.*¹

¹ Extension Educator, Nebraska Extension Hall County, Grand Island, NE, 68801

The Nebraska Extension Special Garden Project originated as a way for youth from across the entire state to gain an interest in gardening, try growing new and unusual vegetables and flowers, obtain the education necessary to be a successful beginning gardener, and learn about the wide range of plant-science related careers. This statewide, hands-on experience allows youth to try growing different plants with their families while gaining life skills.

The project focuses on a different flower or vegetable each year. The plant is selected for a unique characteristic that is slightly different than normal. A four-page educational newsletter covers fun plant facts, history, planting basics, growing methods, plant care, common disease and insect problems, harvest and storage tips, plant science-related careers and county fair exhibiting tips and additional ways youth could exhibit is also included. A paper evaluation/link to an online evaluation accompanied the seeds and newsletter.

Over the past five years the Nebraska Extension Special Garden Project has distributed over 7,265 packets of seeds and educational materials to youth in 85 of the 93 counties across Nebraska. Youth learned important skills and gardening practices including weed identification, irrigation frequency, and insect control. They also planned how they could improve practices the following season including amending the soil and utilizing mulch for weed control.

Whether it is learning how to plant tiny amaranth seeds or how to keep weeds down in the garden, the Nebraska Extension Special Garden Project is teaching youth about gardening, one seed at a time.

National Finalists

MARYLAND 4-H ROBOTICS CHALLENGE

Lantz, W.*¹, Franc, D.*², Lantz, A.*³, Malone, P.*⁴, Murphy, D.*⁵, Sherrard, A.*⁶

¹ Extension Educator, University of Maryland Extension, Mt. Lake Park, MD, 21550

² 4-H Volunteer, University of Maryland Extension, Westminster, MD, 21157

³ 4-H Volunteer, University of Maryland Extension, Oakland, MD, 21550

⁴ 4-H Volunteer, University of Maryland Extension, McHenry, MD, 21541

⁵ Faculty Extension Assistant, University of Maryland Extension, Cockeysville, MD, 21030

⁶ Extension Educator, University of Maryland Extension, Mt. Lake Park, MD, 21550

Robotics is one of the fastest growing 4-H program areas. Having a method to “exhibit” or compete at robotic competitions is a key to successful sustainable youth robotics programs. While some 4-H volunteers have helped guide 4-H members interested in robotics to FIRST and VEX robotic competitions, these programs are complex and often very intimidating for those with little experience in robotics. A group of extension educators and volunteers developed the Maryland 4-H Robotics Challenges to:

1. provide a statewide 4-H robotic competition
2. increase 4-H member and non-member participation in STEM activities
3. provide experiences that would lead to more participation in robotic competitions such as FIRST and VEX
4. provide a method for selecting 4-H members to represent Maryland at the National 4-H Engineering Challenge robotics contest.

The Maryland State 4-H Robotics Challenge is divided into two competitions: LEGO Robotics Challenge and Robotics Engineering Challenge. A \$1,500 mini-grant from the University of Maryland Extension was used to help establish the program and state event. Outreach activities and workshops were held throughout the state. In 2014, a total of 21 teams with 108 4-H members participated in county and state competitions. In 2014, 13 4-H teams and 62 members participated in Maryland FTC and VEX Competitions. 91% of the teams reported participating in the 4-H Robotic Challenges. Robotic team mentors reported that a majority of the robotic team members belonged to special interest 4-H clubs and had not participated in 4-H prior to their involvement in 4-H robotics.

4-H IS WILD ABOUT THE OUTDOORS

Schurman, C.*¹

¹ Extension Educator - 4-H/Youth, Penn State Extension, Indiana, PA, 15701

“4-H Is Wild About The Outdoors” was the theme of the 2014 Southwest Regional 4-H Camp. A population of 56 campers and 25 teen counselors from seven counties were involved with to teach youth about the outdoors, nature, wildlife, and other environmental topics. Campers participated in workshops including exploring mammals, water, fish facts and habitat, bluebirds, wild plants, fish casting, dissecting owl pellets, wildlife tracks, scat, and geocaching. Campers were asked to list a new challenge they were able to accomplish with the support of fellow campers or counselors. 98% listed at least one challenge they accomplished. Campers were also asked how many friends they made at camp – all campers indicated they made at least one new friend, with an average of four new friends. Campers were also asked to set goals for the week. 96% of campers responded that they had set at least one new goal. 86% of those who listed a goal indicated that they had accomplished that goal. 95% of the campers indicated an activity where they worked together with cabin or group to accomplish a task or challenge. 100% of the campers indicated they learned something about nature. Campers were also asked to indicate how safe they felt at camp - 98% of the campers listed “felt safe” or “no worries – felt completely safe”.

GREEN & GROWING YOUTH FIELD DAY

Glenn, M.*¹, Snodgrass, C.*², Smith, Diana*³

¹ Horticulture Extension Agent I, UF/IFAS Extension Manatee County, Palmetto, FL, 34221

² VEGETABLE EXTENSION AGENT I, , Palmetto, FL, 34221

³ 4-H Extension Agent, IV, UF/IFAS Extension Manatee County, Palmetto, FL, 34221

Manatee County has over 313,000 acres of production agriculture and ranks 7th in the state of Florida in agricultural sales. However an aging workforce threatens the future viability of these enterprises. Therefore it is vital to inspire our youth to consider careers in agriculture. On June 27th 2014, the inaugural “Green & Growing Youth Field Day” introduced

more than 25 youth ages 8-13 to the world of commercial agriculture through various educational field trips and activities designed to demonstrate that careers in agriculture are important and challenging. At the Gulf Coast Research and Education Center in Balm, the youth learned about the many diverse agricultural careers by speaking with researchers and participating in scientific, hands-on activities. They then toured a local nursery where they learned about propagation, transplanting, growing, and selling native plants. They also toured the Manatee County Master Gardeners’ demonstration gardens and learned to transplant and care for a seedling which they later took home. They discovered the art of butterfly farming, and played a variety of agriculture-themed games. Participants included a diverse group of youth from different areas of Manatee County. They were provided the opportunity to explore science and technology in an agricultural setting and became interested in careers in agriculture. Evaluation results showed the youth had a 39% increase in knowledge about agricultural science, a 36% increase in knowledge about the nursery business, and a 28% increase in interest in pursuing a career in agriculture.

State Winners

WORTH COUNTY 4-HER’S

Johnson, D.A.*¹

¹ Worth County Extension Education Specialist, Worth County Extension Service, Northwood, IA, 50459

4 -H has been a catalyst for positive youth development across the U.S. for more than a century. 4-H Youth develop leadership, citizenship and communication skills. 4-H members that get involved at the State 4-H level have a greater chance to improve their life skills. During the author’s 33 year career Worth County 4-H has had a state record holding 86 Worth County 4-Her’s selected to serve on the Iowa State 4-H Council, another state record 152 Worth County 4-H members have won State 4-H Project Awards and National Club Congress trips, with 16 Worth County 4-H members being chosen to represent Iowa (only 4 selected/year) at the very prestigious National 4-H Conference in Washington D.C. Worth County 4-H has had 10 4-H er’s serve on the Iowa State 4-H Tech Team. The author organizes and leads dozens of leadership development workshops and is extremely instrumental in the recruitment of Worth County 4-H members to participate at the State 4-H level. Worth County 4-H annually leads the state in attendance at the annual Iowa State 4-H Conference with 1,026 Worth County 4-H members participating in the last 18 years even though Worth County would be in the bottom 10% of youth county population in Iowa. The author has secured more than \$10,000 of scholarships and grants for registration fees and expenses to participate in State 4-H events. Worth County 4-H has also led Iowa 4-H with youth participating in the Washington D.C. 4-H Citizenship program with the author initiating, organizing and leading a total of 750 Worth County 4-Her’s on the 8 day trip since the author lauched the Worth County 4-H Washington D.C. trip in 1992. The author has also focused on youth farm safety education and has spoken to 3,914 kids.

EXCELLENCE IN AG SCIENCES DAYS

VanDeWalle, B.*¹

¹ EXT. EDUCATOR, UNIVERSITY OF NEBRASKA, Geneva, NE, 68361

Nebraska Extension recognizes the vital role agricultural education instructors have in educating tomorrow's agricultural leaders; therefore Nebraska Extension has conducted eight years of agricultural in-services for Nebraska high school agriculture educators. This annual program, Excellence in Ag Sciences Days offers teachers the opportunity to connect with University researchers, extension faculty and discuss the latest agricultural issues to obtain ideas and resources for use in the classroom. Since its inception, nearly 89% (n=139) of Nebraska agriculture teachers have participated in at least one program. Example topics covered include: soil science, agricultural water management, water quality, water-wise landscaping, sustainable agriculture, etc. Since 2011, over \$200,000 in grant funds has been used to support this program which has provided teachers equipment, curriculum and classroom resources related to soil science and water management.

In 2013, sixty teachers participated, which focused on irrigation management. As a result:

-70% of teachers (n=58) surveyed had a major or significant improvement in their knowledge of irrigation water use efficiency and 78% had a major or significant improvement with their knowledge of irrigation management technology

-84% majorly or significantly improved their knowledge on crop water use estimation

-50% of teachers plan to start teaching about irrigation management

-82% saved time (from not having to prepare lessons, etc.) by participating.

-98% said this would improve their classroom curriculum.

A one-year follow-up survey conducted in 2014 showed that sixty percent (n=43) used the irrigation equipment given in their classroom curriculum and nearly 70% used resources from the conference to supplement curriculum.

JR. MASTER GARDENER PROGRAM

Weinmann, T.*¹

¹ CASS COUNTY EXT HORTICULTURIST, Fargo, ND, 58108

92 % of children in North Dakota do not eat enough vegetables for a healthy diet. (Center for Disease Control and Prevention. The Jr. Master Gardener Program of ND was allocated \$30,000 by the ND State Legislators, that supported 54 projects involving teaching 4,820 youth in 51 counties about horticulture. In addition to an increase in healthy eating an increase in physical activity was accomplished. Science skills were taught and the youth embraced ownership in their projects in their communities. One example of the benefits of this program was that food pantries received more than 3 tons of food as a result of this program.

YOUTH LIVESTOCK OBSERVATION TOOL

Loyd, B.M.*¹, Straight, A.S.*², Hutson, Z.*³

¹ EXTENSION AGENT, West Virginia University, Weston, WV, 26452

² Extension Agent, West Virginia University, Harrisville, WV, 26362

³ Extension Agent, West Virginia University, West Union, WV, 26456

Livestock is a part of many individuals' everyday lives in rural West Virginia. However, many of the youth taking livestock projects today have little or no farm background. Livestock projects teach youth a variety of life skills, including but not limited to, record keeping, good organization, responsibility, and money management. In addition, basic animal husbandry needs taught, so that youth learn more than just how to show the animal. Home visits are a valuable teaching method, especially for first year members. Home visits provide an opportunity to teach in a practical hands-on manner. Uniform teaching and evaluation of the visits is important, especially when more than one person is making the visits. A Youth Livestock Observation Tool was developed, peer reviewed, and is used by eight counties in WV. A multi-county Livestock Overnight Camp was held that brought youth together and focused on animal health, husbandry, quality assurance, and ethics. The camp gives youth the opportunity to learn project knowledge and life skills, rather than just how to be the best in the show ring. Participants are encouraged to learn the basic reason for raising livestock, instead of just grooming, fitting, and showing. A research project was also developed and implemented in 2014 using Turning Point software that surveyed participants at the WV State Fair to determine if youth were gaining livestock subject knowledge, or just show skills. Exhibitors of beef cattle, hogs, sheep, and goats scored on average 66% on the production questions and 67% on the showing questions.

WHITE COUNTY CITIZENSHIP PROGRAM

Heck, A.*¹

¹ Cea - 4-H/agriculture, , Searcy, AR, 72143

4-H Citizenship programs empower young people to be well-informed citizens who are actively engaged in their communities. The goal for the White County 4-H program is to provide youth with opportunities to develop the life skills that will help them become capable, responsible, and compassionate adults. Multiple program activities and teaching methods were utilized in order to accomplish the goal. I coordinated a Government Appreciation Day for all elected officials in White County, a 4-H project fair, conducted a presentation on the voting process, a citizenship scavenger hunt was conducted as well as programs on ballot issue education. The events were made public through the use of news articles and public service announcements that reached over 25,000 White county residents, circular letters and flyers as well as personal contacts. Members and volunteers from various 4-H clubs expressed their appreciation to the elected officials by giving public address at the Government Appreciation Day.

In addition, all elected officials were presented with a t-shirt and coffee mug. Over 35 elected officials and 85 4-H members and leaders turned out for the event. In addition, teen leader members and volunteers were educated on the public ballot issues. They in turn educated their local clubs and communities on the ballot issues. As a result of the multiple programming activities, 4-H members and volunteers are better informed citizens of White County.

2014-2015 4-H EFFORTS

Drake, Jr., G.*¹

¹ , , Morgantown, KY, 42261

Working with 3 different 4-H agents in the Mammoth Cave area I have preformed a variety of educational service or training for the 4-H program. I taught a class on basic parliamentary procedure in Simpson County, I facilitated leadership and fundraising opportunities for the Butler County 4-H teen club, and I presented a beekeeping program for the Metcalf County 4-H agent about beekeeping for 884 students. These diverse programs are a continuation of my work to help young people develop their leadership skills and become good citizens.

CHICKEN EMBRYOLOGY, RAISING AND PROCESSING

Kinlaw, S.C. ¹ and Spearman,* R.L.K. ²

¹ Extension Agent-4-H and Youth Development, North Carolina Cooperative Extension, Bladen County, Elizabethtown, North Carolina 28337

² Extension Agent- Livestock, North Carolina Cooperative Extension, Bladen County, Elizabethtown, North Carolina 28337

The objectives of the embryology and chicken raising program was to provide teaching curriculum and hands-on activities for second grade and high school animal science classes, to provide meat donations to food pantries, and train farmers interested in harvesting chickens under exempt status. Curriculum met essential standards for 2nd grade and high school classes. High school students raised and managed the chickens and watched the processing.

Evaluations showed 100% of 2nd grade teachers reported improvement in class participation, recording keeping, problem solving and critical thinking. Teachers said most students improved their knowledge of science and showed an increased interest in science. A teacher commented “The project addresses the essential standard for the NC Common Core - Understanding animal life cycles.” The high school students that raised the chickens said “they learned about responsibility, how to read feed labels, problem solving skills, leadership and have a new appreciation for the process of getting chicken from the farm to the table.” The project increased the learning opportunities for 360 2nd graders, 21 2nd grade teachers, 50 high school students, 8 Extension Agents, 20 farmers and 8 volunteers. 785 pounds of chicken was donated to local food pantries and fed 200 families.

PAYNE COUNTY CATTLE HANDLING CONTEST

Anderson, N.*¹

¹ EXT EDUCATOR AG/4-H, , Stillwater, OK, 74074

Most young people today are removed from the family farm and have little or no animal agriculture experience. This program was established in 2004 to educate young people, grades 7th through 12th, on livestock handling, Beef Quality Assurance, animal health, record keeping and teamwork. The contest is made up of three member teams. Teams are divided into two divisions, juniors – 7th -9th grade and seniors – 10th -12th grade. Participants are given explicit instruction and details concern all aspects of the contest. After participating in a live action, inter-active training, teams are active participants in processing beef calves. Teams utilize their livestock handling skills to sort, move and catch calves in chute and head gate. Team members then divide and conquer to tag, take temperature, apply pour-on, oral and injectable pharmaceuticals. Teams complete a health evaluation including checking for runny noses, temperature, injection site lumps, lesions, eyes and feet. Teams record all work performed including pharmaceutical lot numbers and expiration dates. This process is repeated until the set number of cattle has been processed. Teams are evaluated by a panel consisting of industry professionals, producers, and extension specialists. Panel evaluates teams on efficiency/speed, record keeping, cattle handling techniques and teamwork. Sponsors provide all facilities, cattle, pharmaceuticals, supplies and prize money of \$1200.00. Prize monies of \$300.00, \$200.00 and \$100.00 are given to 1st, 2nd and 3rd placed team consecutively per division. Results speak for themselves-we’ve never lost a kid or a calf!

4-H HORSE PROJECT

Horsman, M.*¹

¹ Extension Agent, University of Tennessee, Franklin, TN, 37064

The need for the 4-H Horse Project was quantitative as well as qualitative opportunities for members to become “model 4-H’ers” by using horses as a learning tool. Through the implementation of incentive programs, unique educational scenarios, community awareness through creative marketing and civic service, and incorporating parents and volunteers into the program, member opportunities and skills grew exponentially. The process of elevating the programs available in order to enrich the learning experiences for participants would be accomplished in a multistep platform. Getting kids to try new experiences and reach beyond comfort levels can be challenging. As such, a Participation Point program provided yearly awards and achievement awards, scholarships, as incentive to strengthen life skills. The 135 members in the project applied leadership skills acquired in trainings, participated in interactive educational sessions, organized community service projects, and implemented a marketing opportunity with Equifest of Tennessee. Impact of programmatic changes included: 6 senior portfolios submitted, 12 service projects for over 1600 hours, \$18,800 raised, Equifest marketed to over 4

million people, all 14 senior members accepted into college, and over 3,000 volunteer hours donated. Members who participate in the Williamson County 4-H Horse Project are able to strive to new heights and are better prepared succeed in secondary education and careers

GROWING HORSEMEN

Swanson, C. A.*¹, Mayo, K.*²

¹ Animal Science Agent, Charlottesville, VA, 22902

² 4-H Agent, Fork Union, VA, 23055

While the horse industry does not currently have the same level of resistance to anthelmintic drugs that that we see in small ruminants, research shows that resistance is increasing. Preventing this issue from becoming wide-spread in equines is critical, since many of the tactics now used in sheep and goats (i.e. culling of high shedders) are not likely to be adopted by the average horse owner, due to the value of each individual animal. Traditional deworming practices do not allow for individualized parasite management, and many equine owners will not deviate from the traditional methods which have been linked to parasite resistance. Veterinarians currently recommend utilizing routine fecal egg counts as a tool in identifying and controlling internal equine parasites.

Realizing that youth are often the best agents of change, an educational program on equine internal parasites was designed for 4-H youth, blending classroom instruction with hands-on fecal egg count labs, and utilizing samples from central Virginia horse farms. The program was funded by a grant through the Virginia Horse Industry Board. Youth were asked to make hypotheses based on age, physical appearance of the animals, stocking rate, and current deworming protocol on farm. Youth analyzed data from the research project and put their findings into poster form for sharing with the public. Posters were presented at the Agri-science poster competition at the State Fair of Virginia, where several youth teams placed at the top of the competition.

2015 FARM SAFETY CLASS

Palmer, M.*¹, Cromwell, S.*²

¹ Agriculture/4-H Youth Agent, UTAH STATE UNIVERSITY, Ephraim, UT, 84627

² Family and Consumer Science Faculty, Utah State University Extension, Ephraim, UT, 84627

Sanpete County is a small mostly rural county in Central Utah which has a large agriculture industry. Sanpete County boasts the largest turkey production and the most sheep and lambs when compared to the 28 other counties in Utah. Other top commodities produced include cattle, alfalfa hay, and barley. Most of the 901 farms in Sanpete County rely on youth to provide much of the labor for the farm enterprises. Also many more youth live next to, and visit farms on a regular basis due to the rural nature of the county. Agriculture is one of the most dangerous industries in the nation. Injury rates are highest among children under the age of 15 (OSHA Farm Safety Fact Sheet 2005). To reduce the risk of agriculture related injuries and death for youth in Sanpete County a highly interactive

hands-on community based farm safety educational course was developed. This course succeeded in 100% graduation rate of 172 youth in 10 years with 100 hours of instruction and 300 volunteer hours of service. Pre/post tests show an increase of 10% knowledge gained and 94% of youth rated the program as good or excellent.

WASATCH COUNTY JUNIOR LIVESTOCK SERIES

Sulser, A.*¹

¹ Agricultural Extension Agent, Utah State University, Heber City, UT, 84032

Wasatch County Junior Livestock Series for youth both 4-H and FFA is more than just about the sale. Since 2010 clinics in feeding and animal nutrition, showmanship and sportsmanship, proper fitting techniques, records and record keeping, and ethics in and out of the show ring have been an integral part of learning for youth and parents of Wasatch County. With 84% of clubs in Wasatch County being family type clubs, the junior livestock committee realized that not all club members were getting the correct information about livestock. The author along with FFA advisors initiated seminars taught by experts in the fields listed for youth and parents to increase their knowledge. Seminars averaged two hours of instruction time. Teaching methods were hands on for showmanship, fitting, records, and feeding, question and answer for the remainder of the seminars. Youth and parents were able to gain knowledge about their particular animal species. Exhibitor numbers have averaged two hundred forty since 2010; of those 100% of the exhibitors and one parent has attended at least one seminar, 50% have attended two or more seminars. Results of program has been fewer animals not making weight at fair, increased participation in showmanship classes, and increase in number and quality of record keeping portfolios.

WYOMING RESOURCE EDUCATION DAYS (WYRED)

Smith, M.*¹

¹ Northwest Wyoming rangeland resources educator, Big Horn County Extension, Greybull, WY, 82428

Wyoming Resource Education Days (WyRED) will celebrate its 20th year in 2015. This week-long camp provides youth the confidence and skills to pursue a career in natural resources. High school aged students, and a few younger participants, from across Wyoming gather for a hands-on learning experience.

Topics are location dependent but usually include riparian management, soils, plant physiology, plant identification, ecological sites, range utilization, wildlife, water quality, threatened and endangered species, applied management practices for range management, weed control, multiple use and many more. Students dig soil pits, collect plants in plant presses, talk to ranch managers, visit research sites and improvement projects. These activities help them prepare for the range judging competition held at the end of the week. 4-H clubs and FFA chapters often prepare in advance for this

competition and come back year after year to compete.

One evening a panel of natural resource professionals – from agency employees to ranchers- are assembled to talk about their careers. Many youth are already interested in natural resource careers but this exposure, along with the skill building during the camp, inspire youth to take their future careers in that direction.

WyRED has been a very successful collaboration between the Wyoming section Society for Range Management and University of Wyoming. Youth learn skills in a hands-on experience that could be used for potential career in natural resources or throughout their life as natural resource users.

TEXAS DISTRICT 5 SPORTFISHING

Fry, B.*¹

¹ CEA-AG, Texas A&M AgriLife Extension Service, Jasper, TX, 75951

The Texas, district 5 virtual 4-H sportfishing tournament has been offered the past 2 years for youth and families to go fishing together. Participation is about 40 youth entries per year. After the first year this program has expanded to 2 other districts and reaching 62 counties. It is going coastal next year which has the potential to reach 2 additional Coastal districts in Texas. Families follow along on the District 5 4-H Facebook web page and post Bass with the item of the day “a common household item” such as a brush or key. There are five events spanning from October to April in which to put together the winning weight. The use of the Texas Parks and Wildlife “Length-weight conversion table for Texas Largemouth bass” help to place the 4-H members fish.

SEARCH FOR EXCELLENCE CROP PRODUCTION

National Winner

WEEDING OUT THE ECONOMIC LOSS!

McAvoy, C.E.*¹, Steed, Shawn*²

¹ Multi-County Commercial Horticulture Agent, University of Florida, Institute of Food and Agricultural Sciences, Bushnell, FL, 33513

² Multi-County Ornamental Horticulture Agent, University of Florida, Institute of Food and Agricultural Sciences, Seffner, FL, 33584

Nursery crop production’s biggest expense is weed control either through the use of chemical herbicides or intensive hand labor. Two commercial horticulture agents teamed up to develop a comprehensive and hands-on program on the following topics: weed identification, proper calibration of granular and liquid herbicide application, and a demonstration

of herbicide efficacy on common container weeds. The objectives of the three workshops were to increase knowledge on herbicide effectiveness on common nursery weeds and change behavior through calibration of equipment. Three hands-on workshops were held in the West Central Florida region that included herbicide/weed demonstration plots. The programs attracted 177 attendees over 2 years. Post-evaluations of clientele (n=70) determined that 94% will save money from using the knowledge gained on pre-emergent herbicide trials and herbicide calibration with an estimated \$1627.60 per attendee per year. The result of this programming enabled nursery crop producers to save money in material and labor costs, and reduce herbicide loss to the environment through the use of proper calibration techniques.

National Finalists

THUMB AG RESEARCH AND EDUCATION

Battel, B.*¹, Kaatz, P.*², Nagelkirk, M.*³, Vincent, J.*⁴

¹ , , Bad Axe, MI, 48413

² Extension Field Crops Educator, Michigan State University Extension, Lapeer, MI, 48446

³ Extension Field Crops Educator, Michigan State University Extension, Sandusky, MI, 48471

⁴ Program Technician, Michigan State University Extension, Sandusky, MI, 48471

TARE is an example of what can be accomplished when Extension, growers, agri-business, and major commodity groups partner together. TARE was established in 2004 and the purpose is to conduct on-farm studies aimed at increasing grower productivity and profitability. This is accomplished by establishing corn hybrid and soybean variety plots, and by evaluating agronomic practices on corn, soybeans, forages, and wheat. The TARE program area represents approximately 25% of Michigan’s corn and soybean production.

TARE is uniquely positioned to perform hybrid, variety, and product performance research for growers in Michigan’s greater “Thumb” area. TARE personnel use conventional equipment to establish and harvest plots across a four-county area. Typically, 100-125 corn hybrids, and 80-100 soybean varieties are evaluated in RCB design, and repeated from site to site. TARE personnel depend on growers to provide tillage, fertilization, and pest control. TARE personnel plant and harvest plots, and establish treatments. After harvest, plots are analyzed statistically, and the data are compiled in a booklet, of which 2,000 copies are distributed to local growers, and posted on-line annually. TARE personnel present the summary information in five public forums each year.

A comprehensive survey of the TARE project was conducted in 2014. Of respondents who have viewed a copy of our results booklet during the past four years, 42.2% indicate that our project results have increased the profitability of their farm by \$1-\$10 per acre, and 24.0% indicate that our project results have increased the profitability of their farm by \$11-\$18 per acre.

THE WINE IS MADE IN THE VINEYARD

Fiola, J.A.*¹

¹ Specialist in Viticulture and Small Fruit, University of Maryland Extension, Keedysville, MD, 21756

A traditional theme in viticulture states “the wine is made in the vineyard”, meaning that to make great wine you need to start with great grapes. That is the goal of the Maryland Viticulture and Enology program; simply to give commercial grape growers the tools to grow great grapes and make great wine. This goal demands comprehensive research and educational programs to address the demands of this rapidly expanding industry. As a viticulture specialist, I have a unique clientele – part time farmers (“weekend warriors” - most hold full time jobs and work their vineyard winery on the side), and non-agriculturalists. Not only is my job to assist new growers with basic agronomic and variety information, but to assist the established growers in cutting edge viticultural management techniques and pest management leading to premium quality grapes. The key components of my Grape and Viticulture Program are: a comprehensive web site - The Grapes and Fruit Website; Educational programs such as Annual winter meetings, regional twilight meeting, summer field days, and wine workshops; A research program that includes regional variety testing, leading to local variety recommendations; and Timely Viticulture Newsletter that delivers practical info in a timely fashion. The program is a significant resource for the commercial fruit industry and other professionals in Maryland and the Mid-Atlantic.

ALFALFA VARIETY YIELD TRIALS

Norberg, S.*¹

¹ Regional Forage Specialist, Washington State University, Pasco, WA, 99301

Hay production is the fifth largest economic agriculture commodity in the State of Washington. It is very difficult, without properly conducted alfalfa variety trials by a Land Grant University, for producers to make an informed alfalfa variety decision. This is the reason the alfalfa variety trials are the number one priority of the Washington State Hay Growers Association. The objective of this extension program is to develop research based information on performance of currently available alfalfa varieties and disseminate the results to growers in the Columbia Basin of Washington. Over the last three years research has been conducted at two locations which included 18 different alfalfa seed companies cooperating with 103 entries into the experiments. The results were statistically analyzed and published each year in a report. The results of the report were sent out in an e-mail list serve to over 350 subscribers, presented at the Northwest Hay Expo each year, published in the proceedings, at which over 1,650 people attended as well as other meetings each year. At the meetings, education included the difference in yield and gross income by selecting the top winners as compared to the trial averages. I published an evaluation of the program in the December 2014 issue of the Journal of the NACCA. Yield of top three varieties was 0.6 tons/acre over the trial average.

Currently, approximately 52% of Washington producers make their varietal decisions from these trials for a best estimate of impact of \$15.0 million over the last three years.

State Winners

POST ROCK EXTENSION DISTRICT

Wick, S.*¹

¹ District Extension Agent, ANR, K-State Research & Extension, Smith Center, KS, 66967

Producers in the crop production enterprise need access to research information to operate an efficient and profitable operation. Crop producers deal with many decisions throughout the growing season and I am always looking for ways to help producers make more knowledgeable and sound decisions. My main emphasis is on the agronomic aspect of production agriculture. In the last three years, I have organized 31 demonstration plots illustrating four different crops in the Post Rock Extension District which includes corn, grain sorghum, soybeans and wheat. Yield reports are published annually and are distributed in the seven area newspapers, on our District website along with given to our walk-in clientele at each of the 5 District Offices. Soil testing has also saved producers 20% on their fertilizer costs. The rental arrangements between landowners and producers can have significant impacts on the risk and returns of those operations. For the last three years, I have implemented a leasing arrangements survey in the Post Rock Extension District that has provided leasing arrangements along with averages of rental rates. I have also organized and implemented 52 educational events such as consultations, workshops, field days along with setting up educational displays within the district. In the last 3 years, I have had 783 personal contacts with producers providing them with research-based information to help them make educational production decisions. I also provided Kansas State University’s research-based information through radio programs for two radio stations along with personal columns as well as on our District website.

HERBICIDE MODE OF ACTION (HMOA) ONLINE MODULE

Miller, R.*¹, Gunsolus, J. L.*²

¹ Associate Extension Professor, University of Minnesota, Rochester, MN, 55904

² Professor and Extension Weed Scientist, University of Minnesota, St. Paul, MN, 55108

I designed and implemented the Herbicide Mode of Action (HMOA) Online Module in coordination with the 2014 Field School for Ag Professionals. The module was used as a flipped classroom for individuals planning on attending the HMOA Field School session. The HMOA module was designed in Moodle 2.6 and utilizes a combination of videos, quizzes, and written reference materials for the online instruction. The intention was to have Field School participants complete the online session ahead of participating in the Field School HMOA

session, and the goal was to have Field School participants that were better able to make learning gains during the Field School session. 75 of the 115 Field School attendees completed the online course. An electronic evaluation was sent three months after completing the Field School, and 53 attendees responded to the electronic evaluation of the HMOA online flipped classroom. Survey results were very positive, and almost all survey respondents indicated that the online course helped them learn more at the in person Field School session. Most respondents indicated they would be likely to use other online modules created in a variety of content areas. I feel this module was a success and online education is an important area to continue to develop.

MANAGEMENT STRATEGIES FOR COMMERCIAL APPLE GROWERS

Clark, J.*¹

¹ AGRICULTURE AGENT, UW-Extension, Chippewa Falls, WI, 54729

The purpose of this program was to increase awareness of pest management strategies within commercial apple producers and designed to assess the overall management skills of individual producers. Learning objectives included increasing knowledge and adoption of pest management strategies and awareness of management attributes which included communications, planning and organizing, decision-making, leadership, managing resources, teamwork, initiative, creativity, and empathy. A combination of Integrated Pest Management activities and Management Assessment Center workshops were designed to accomplish these objectives. This program was delivered through several methods which included classroom learning, weekly growing-season teleconference, field days, small-group activities, and one-on-one consultation. Grants were secured through various agencies to provide pest monitoring and trapping equipment and management skill activity supplies. Twenty-eight apple growers from Wisconsin and Minnesota participated in the program with a varying degree of involvement. Ten growers participated in the pest management portion of the program while eighteen were involved in the management assessment center. Behavioral change regarding adoption of integrated pest management, reduction of pesticide use, and management skills were used to evaluate the success of the program.

IMPROVING IRRIGATION EFFICIENCY

Gordon, B.*¹

¹ CEA-Agri, , Searcy, AR, 72143

The main goal of this educational program was to increase irrigation efficiency of corn and soybean producers in White County, Arkansas. I achieved this goal by working hands-on with crop producers to implement computer software that generates efficient irrigation designs. PHAUCET is a computer program that calculates appropriate hole sizes to maximize efficiency in furrow irrigation systems. Last year, I worked with four row crop producers who were interested in improving

their irrigation designs. Through a combination of on-farm visits, one-on-one consultations and phone calls, I collected necessary field data required to run PHAUCET. I developed irrigation designs for 37 producer fields, accounting for over 900 acres of corn and soybeans. The use of PHAUCET reduced irrigation water use by approximately 25%. This equated to a savings of \$9.00 per acre totaling over \$8,500 in savings to producers who adopted PHAUCET designs on their farm. All four producers plan to put all of their furrow irrigated acreage into PHAUCET next year. Thanks to these demonstrations, five other producers have contacted me with intentions to use PHAUCET designs on their farms. Because this program is in its first year, efforts will continue to be made in expanding the program. Methods to expand the program will include educating more producers through newsletters, crop production meetings, and field tours, in conjunction with obtaining more irrigation monitoring equipment.

JENKINS COUNTY RESEARCH PROGRAMS

Parker, W.*¹

¹ County Extension Coordinator, University of Georgia, Millen, GA, 30442

Peanut acreage in Jenkins County has increased substantially since the passage of the 2002 farm bill, in which the old peanut quota system was dissolved. In 2012, peanuts were a leading commodity in terms of value, with a \$10.2 million farm gate value, while the entire county had a total farm gate value of \$63.2 million. Georgia Green is a runner-type peanut cultivar released in 1995 by the Georgia Agricultural Experiment Stations. In the middle 2000's peanut growers were faced with a variety dilemma, Georgia Green's "shelf life" was expiring, therefore; demand for information on new varieties was increasing at a rapid pace. A challenge for peanut producers is a lack of "on-farm research" data to support emerging and new varieties. A comprehensive research and educational based extension program was developed to help farmers transition to more productive peanut varieties. Research programs included: on-farm county variety trials and variety trials at the Midville Research Center. Peanut educational opportunities offered to Jenkins County growers included: the annual Midville Agronomic Crops Field Day, peanut production meetings, and "shade-tree" meetings during the growing season. The county agent used on-line resources such as blogs and the local newspaper to educate and disseminate information to peanut farmers.

FUELING THE FUTURE WITH BIOENERGY CROP PRODUCTION PROGRAMMING

Dekoff, J.*¹

¹ Specialist, TSU Extension, Nashville, TN, 37209

The purpose of this educational program is to provide research-based information to stakeholders on bioenergy and the type of feedstock production that is best for Tennessee. In February 2012, a needs assessment of Tennessee agricultural Extension agents was performed to assess the level of interest

in switchgrass production for bioenergy and to identify other feedstock interests by county. Between February 2012 and February 2015, this information was disseminated to producers, youth, teachers and Extension agents to increase awareness and understanding of this important source of renewable energy. Activities included live presentations, demonstrations and laboratory experiments. Different methods of communicating this information were implemented and included slide presentations, hands-on activities, demonstrations, social media communications and written publications. These activities led to over 1000 direct contacts and over 25,000 indirect contacts. Evaluation of the program was performed using questionnaires. Participants indicated an increase in knowledge of biofuels, biofuel production, and biofuel feedstocks. They also indicated a significant increase in their perceptions, awareness, interest and knowledge of on-farm biodiesel production.

2014 – MCLENNAN COUNTY ROW CROP PRODUCTION

McLellan, S.*¹

¹ CEA-AG/NR, , Waco, TX, 76701

Row Crop Production in McLennan County and the Blackland region is conducted primarily as a dryland enterprise, thus, more susceptible to drought and weather and/or climatic irregularities. Profitability is affected directly for all producers by market/price changes. The McLennan County Row Crop Committee has placed emphasis to continue to reinforce crop production programs as a high priority promoting the use of new technology, improved varieties, use of best management practices and environmentally sound options allowing enterprises to be economically sustainable. McLennan County agricultural producers effectively evaluate and adopt research-based technology applications and best management practices for crop and forage systems to enhance their economic competitiveness in the global marketplace.

The objective of Extension Crop Production Educational methods is for McLennan County producers to improve their knowledge of agricultural production systems to improve profitability and conserve resources. This can be done thru crop management practices, IPM and pesticide safety education, licensed and unlicensed pesticide users (including farmers, ranchers, pest control businesses, and the general public) will understand and adopt safer pesticide and non-chemical management methods for managing pests and be able to continue their pursuit of business enterprises and employment. As a result knowledge and skills of pesticide users in Texas will increase while they maintain licenses to maintain their business ventures.

Search for Excellence in Farm and Ranch Financial Management National Winner

FARM TRANSITION AND ESTATE PLANNING: CREATE YOUR FARM LEGACY

Hachfeld, G.A.*¹, Bau, David B.*², Holcomb, Charles R.*³, Ford, Hannon, T.*⁴, Pluto, Lisa K.*⁵

¹ , UM Extension Service, Mankato, MN, 56001

² Extension Educator, UM Extension Service, Worthington, MN, 56187

³ Extension Educator, University of Minnesota Extension, Marshall, MN, 56258

⁴ Attorney at Law, Ford Law Office, Windom, MN, 56101

⁵ Attorney at Law, Pluto Legal, PLLC, Tyler, MN, 56178

Farm Transition & Estate Planning: Create Your Farm Legacy is an interactive workshop targeted at farm and ranch families, addressing financial and legal risk. Key educational objectives are an increase in knowledge and understanding of individual, family, business and retirement goals; intergenerational communications; tax issues; business entities and transition strategies; treatment of heirs; personal estate planning; and long-term health care planning issues. Increased knowledge of these topics enables farm and ranch families to develop and implement a business transition and personal estate plan. Program delivery is by face-to-face workshops with participants receiving a 260 page reference workbook. Workshop activities include discussion and completion of various worksheets. A set of twenty-nine information sheets related to business transition, estate planning and financial management are also available online at www.extension.umn.edu/agriculture/business. Workshop outcomes are measured by way of a post-meeting evaluation. Ten year cumulative data shows over ninety percent of the 5,787 participants attending, self-reported an increase in knowledge of the key educational points. To measure impacts, a follow-up evaluation was sent to participants six months following each workshop. This evaluation was to measure what action participants took regarding their new knowledge and what, if any, financial impact resulted from their actions. Ten year accumulative data shows participants did act on their new knowledge resulting in self-reported financial impact of \$463.8 million. These participants have protected their business by having implemented an orderly process for the transition of their farm/ranch and non-farm/ranch assets to the next generation.

National Finalists

FARM BILL TEAM IMPACTS FARM INCOME

Johnson, S.D.*¹, Brown, C.R. *², Drollette, R. *³, Leibold, K. *⁴, O'Rourke, M. *⁵

¹ Farm & Ag Business Management Specialist, Iowa State University Extension, Altoona, IA, 50009

² Farm Management Field Specialist, Iowa State University Extension

³ Farm Management Field Specialist, Iowa State University Extension

⁴ Farm Management Field Specialist, Iowa State University Extension

⁵ Farm Management Field Specialist, Iowa State University Extension

The Iowa State University (ISU) Farm Bill Team introduced and educated Iowans about the Agriculture Act of 2014. This Farm Bill Team consisted of 8 farm management field specialists, 2 state specialists and 1 program specialist.

The team presented team provided university as well as USDA research to Iowans through meetings, seminars, workshops, factsheets, newsletters, print-based articles and a variety of web-based media including supporting videos and webcasts.

Within a six-month period beginning in October 2014, the team members led over 230 farm bill meetings, reaching over 15,000 attendees. The team also fielded phone calls, e-mails, and were available for office visits with clients.

A webpage devoted to the 2014 Farm Bill was created on the ISU Ag Decision Maker website:<http://www.extension.iastate.edu/agdm/info/farbill.html>

This online resource library included 10 newsletter articles, 8 publications, 6 Decision Tool spreadsheets, 15 webcasts and videos as well as links to details regarding the 230 meetings held across the state.

The economic impact to Iowans is expected to exceed \$500 million dollars for the 2014 crop year, with payments to be made in October 2015. However, the impact of the farm bill education will continue to be felt as the choices made by landowners and operators are multi-year decisions lasting through the 2018 crop year.

2014 FARM ENERGY IMPACT

Romich, E.*¹, Bruynis, PhD, C.L.*², Clevenger, W.B.*³, Gearhardt, L.R.*⁴

¹ Assistant Professor & Field Specialist Energy Development, Ohio State University Extension, Marion, OH, 43302

² Assistant Professor, Extension Educator & County Extension Director, Ohio State University Extension,

Chillicothe, OH, 45601

³ Assistant Professor & Extension Educator, Ohio State University Extension, Defiance, OH, 43512

⁴ Assistant Professor & Leader Ohio Income Tax Schools, Ohio State University Extension, Sidney, OH, 45365

The educational objectives for this educational project were twofold. First priority was educating agricultural lenders on the viability of on-farm solar energy to increase their comfort level in financing projects. The second priority was farm operators so they would correctly evaluate the return on investment of solar energy. Educational activities included seminars, workshops, on-site solar facility tours, and a mobile solar demonstration unit. Materials developed for this educational effort included a series of factsheets and video recordings to assist participants in facility sizing, tax and investment management, and critical issues surrounding on-farm solar applications.

Solar energy programming was presented to 97 agricultural lenders in 2012 and 147 in 2014. 2014 survey results showed a 1.67 increase in knowledge on a six point Likert scale. Forty-seven farmers attended formal workshops in 2014. The average knowledge gain on five measures was approximately 2.0 on a six point scale. Extension educators and specialists conducted 30 programs that reached more than to 712 people on renewable energy related topics.

Participants from programs were contacted later to see if they utilized the information learned. One educator reported that two of the greenhouse owners in attendance had further researched solar applications for their business and one had started installation within 4 months of the program. The challenge for the educational team is to remain current with the changing regulatory and economic nuances that are occurring as this industry starts to grow in Ohio.

WV WOMEN IN AGRICULTURE PROGRAMMING IMPROVES RISK MANAGEMENT

Bailey, D.F.*¹, Brabham, B.E.*², Richmond, J. M.*³, Singh-Knights, D.*⁴, Straight, A.*⁵, Williams, J. O.*⁶

¹ Extension Agent, WVU Extension Service, Glenville, WV, 26351

² Extension Agent, WVU Extension Service, Spencer, WV, 25276

³ Extension Agent, WVU Extension Service, Princeton, WV, 24740

⁴ Extension Specialist-Ag Economics, WVU Extension Service, Morgantown, WV, 26506

⁵ Extension Agent, WVU Extension Service, Harrisville, WV, 26362

⁶ Program Director-Agriculture and Natural Resources, WVU Extension Service, Morgantown, WV, 26506

Growing demand for local products have led to new opportunities for WV agribusinesses. WV female producers responding to this demand recognized the need for different skill sets than that of traditional production agriculture, and that direct marketing presents unique risks. Female

agripreneurs face additional gender-specific challenges, namely: lack of appropriate farming experience and business-skills development opportunities; feeling isolated from other farmers and from educational networks; and gender-disadvantages in traditional agricultural circles. These challenges create barriers to success for women agripreneurs, compromising their economic viability and new market entry.

WVU Extension Service (WVU-ES) offered Annie's Project to 325 participants from 2012-2014 in 18 locations and on-line, in response to an expressed need for risk-management education for female farmers to mitigate production, marketing, financial, legal, and human risks associated with marketing agricultural products. Participants learned how to evaluate expansion/diversification opportunities; tailor production and marketing plans to better meet demand; develop farm/food safety plans; conduct farm financial analyses; and develop beneficial alliances. A majority of participants have adopted or intend to adopt at least one of the risk management strategies learned.

Expanding on the success of West Virginia Annie's Project, WVU-ES hosted the first statewide Women in Agriculture Conference in 2014. The Conference, attended by 144 participants, showcased pre-conference tours, resources, and risk management strategies with livestock, horticulture, finances, and specialty production. Conference evaluations indicated participants found the formal instruction and informal networking conducive to their learning styles.

Impacts of this program demonstrate clientele are better equipped to utilize interdependent risk mitigation strategies.

Search for Excellence in Farm Health and Safety

National Winner

MAINE AGRABILITY

Carlson, L.B.*¹

¹ Maine AgrAbility Coordinator, University of Maine Cooperative Extension, Farmington, ME, 04938

There are an estimated 5,700 agricultural workers in Maine with disabilities. The Maine AgrAbility program provides education and informational services for farmers and farm workers with disabilities to help improve their quality of life. In 2013, Maine AgrAbility made 1,386 direct contacts at agricultural events, distributed 2,185 brochures, 480 "Arthritis and Agriculture" pamphlets, and 179 rack cards about health and safety topics through these events. The program also provides farmers with disabilities direct consultative services and technical assistance to increase the likelihood that they could continue to farm successfully. For example, making recommendations such as modifying or adapting the agricultural operation, buildings, equipment, and/or tools. This is completed through individual on-farm assessments and OT evaluations, resulting assessment reports and follow-up conversations. Participants reported ways that the assessment and suggested changes helped them to decrease physical pain,

stress and strain was through modifications to equipment, the work or home environment and farm operation processes (i.e., 'chores'). Maine AgrAbility participants reported positive changes that occurred as a result of services but often attributed the changes to a number of different factors: change in farmer behaviors, change in equipment, change in environment. The most commonly reported outcomes were increased knowledge and increased accessibility.

National Finalists

ATV SAFETY COMMUNITY EDUCATION ABSTRACT

Boyle, R.R.*¹

¹ Agriculture/4-H Youth Agent, Kansas State University, Stockton, KS 67669

Phillips and Rooks counties in Kansas are rural areas where agriculture is the primary industry. Many farming and ranching operations use All Terrain Vehicles (ATVs) and the youth are allowed to operate the ATVs at a young age with no safety education or training. Additionally, some communities currently have no regulations on the use of ATVs in town, where youth of all ages are operating ATVs with little or no protective gear and the ATVs are not approved for their age or skill capabilities.

ATV Safety Community Education was a part of several local events such as Progressive Agriculture Safety Day, ATV Safety Classes, County Fair Informational Booths, and Wildlife, Agriculture, Conservation, Knowledge for Youth Day (W.A.C.K.Y. Day).

A total of 1,427 people were reached with ATV Safety information utilizing a variety of teaching methods. Youth and adults now have the knowledge to promote the safe and responsible use of ATVs, thereby reducing accidents and injuries that may result from improper ATV use by the rider.

2015 FARM SAFETY COURSE

Palmer, M.*¹, Christensen J.*², Cromwell, S.*³, Ferguson, A.*⁴, Jensen, N.*⁵

¹ Agriculture/4-H Youth Agent, Utah State University Extension, Ephraim, UT, 84627

² County Farm Bureau Rep., Sanpete County Farm Bureau, Moroni, UT, 84646

³ Family and Consumer Science Faculty, Utah State University Extension, Ephraim, UT, 84627

⁴ Vice President of Farm Safety, Utah Farm Bureau, Sandy, UT, 84070

⁵, Utah Farm Bureau, Gunnison, UT, 84634

Sanpete County is a small, rural county in Central Utah that has a large agriculture industry. Sanpete County boasts the largest turkey production and the most sheep and lambs when compared to the other 28 counties in Utah. Other top commodities produced include cattle, alfalfa hay, and barley. A large number of the 901 farms in Sanpete County rely on

youth to provide a majority of the labor for farm enterprises. In addition, numerous youth reside near farms, and visit those farms on a regular basis due to the rural nature of the county. Agriculture is one of the most dangerous industries in the nation. Injury rates are highest among children under the age of 15 (OSHA Farm Safety Fact Sheet, 2005). To reduce the risk of agriculture related injuries and death for Sanpete County youth, a highly interactive, hands-on community based farm safety educational course was developed. The course succeeded in 100% graduation rate of 172 youth over 10 years with 100 hours of instruction and 300 hours of volunteer service. Pre/post tests showed an increase of 10% knowledge gained, with 94% of youth rating the program as good or excellent.

SKAGIT COUNTY HANDS-ON WORKER PROTECTION STANDARD TRAINING

McMoran, D.*¹, Ofelo Boras*², Jaime Ramon*³, Flor Servin*⁴

¹ Agriculture and Natural Resources Extension Educator-Director, Washington State University, Burlington, WA, 98233

² Program Coordinator, Washington State Department of Agriculture, Olympia, WA, 98501

³ Chemical Specialist, Washington State Department of Agriculture, Kennewick, WA, 99337

⁴ Pesticide Safety Trainer, Washington State Department of Agriculture, East Wenatchee, WA, 98022

Skagit County is home to over 15,000 Hispanic residents. This population includes the majority of agricultural workers in the Skagit County. Very few of the agricultural workers in Skagit County have an understanding of the Worker Protection Standard (WPS) created by the United State Environmental Protection Agency (EPA) designed to protect employees on farms, forests, nurseries and greenhouses from occupational exposures to agricultural pesticides, and therefore have the potential to cause harm to themselves or other workers. Workshops were needed to educate the farm worker populations in Skagit County about the WPS to keep workers safe from unnecessary pesticide exposure. Since implementing this educational curriculum in 2007, Skagit County has not had any agricultural worker protection standard violations. Through this training employees in Skagit County have become educated enough to know the standards that employers and employees must follow regarding pesticide use. This information has helped Skagit County become a model for agricultural safety and environmental compliance in Washington State.

State Winners

PAYNE COUNTY CATTLE HANDLING CONTEST

Anderson, N.*¹

¹ EXT EDUCATOR AG/4-H, , Stillwater, OK, 74074

Most young people today are removed from the family farm and have little or no animal agriculture experience. This program was established in 2004 to educate young people,

grades 7th through 12th, on livestock handling, Beef Quality Assurance, animal health, record keeping and teamwork. The contest is made up of three member teams. Teams are divided into two divisions, juniors – 7th -9th grade and seniors – 10th -12th grade. Participants are given explicit instruction and details concern all aspects of the contest. After participating in a live action, inter-active training, teams are active participants in processing beef calves. Teams utilize their livestock handling skills to sort, move and catch calves in chute and head gate. Team members then divide and conquer to tag, take temperature, apply pour-on, oral and injectable pharmaceuticals. Teams complete a health evaluation including checking for runny noses, temperature, injection site lumps, lesions, eyes and feet. Teams record all work performed including pharmaceutical lot numbers and expiration dates. This process is repeated until the set number of cattle has been processed. Teams are evaluated by a panel consisting of industry professionals, producers, and extension specialists. Panel evaluates teams on efficiency/speed, record keeping, cattle handling techniques and teamwork. Sponsors provide all facilities, cattle, pharmaceuticals, supplies and prize money of \$1200.00. Prize monies of \$300.00, \$200.00 and \$100.00 are given to 1st, 2nd and 3rd placed team consecutively per division. Results speak for themselves—we've never lost a kid or a calf!

PROGRESSIVE AGRICULTURE SAFETY DAY ON THE FORT PECK RESERVATION

Becker, W.¹

¹Fort Peck Reservation Extension Agent, Montana State University, Poplar, MT 59255

The Fort Peck Reservation Extension Office trained in the Progressive Agriculture Safety Day curriculum that was developed. The project was to teach agriculture safety to the Assiniboine and Sioux Tribes located in Northeastern Montana. This area is considered to be very rural; however the families are 3+ generations removed from agriculture. The Fort Peck Reservation Extension Office was the only program in the State of Montana to host these Safety Days over the last three years. Each year the school is approached to hold a Safety Day and then together with the teachers, we develop the program to fit the needs and objectives for that particular school. The curriculum is 100% hands-on and reinforced that every child will have the chance to participate in all of the Safety Day activities. The grant allows for students and volunteers to receive a safety day bag, t-shirt, and insurance for the day of the program. In addition, businesses and community departments are encouraged to donate safety items to augment what they are learning at the day's events. Some of the topics chosen are grain, chemical, first-aid, meth, roadway, railroad, electrical, sun, and water safety. The curriculum is very easy to use and allows for outside speakers to understand the objectives and concepts being taught.

Search for Excellence in Forestry and Natural Resources

National Winner

2015 SFE MAPLE GRADING SCHOOL

Hopkins, K.M.*¹, Marckres, H.*²

¹ EXTENSION EDUCATOR, University of Maine
Cooperative Extension, Skowhegan, ME, 04976

² Chief of Consumer Protections, Vermont Agency of
Agriculture Food and Markets, Montpelier, VT, 05620

Maple syrup production has traditionally been viewed as a seasonal utilitarian commodity but is increasingly being produced and marketed as a gourmet food item. Value-added food products offer opportunities for higher operation profit levels as long as emphasis is placed on the purity and natural quality to achieve the price differential between commodity pricing and gourmet food pricing. Increasingly, challenges to this purity and quality are threatening price differentials. Confusion results from rapid industry expansion and varying state and provincial regulations for grading syrup. Ideas for a grading school and associated supplemental materials were refined from producer groups, syrup packers and regulatory agencies to create a broader understanding and application of maple grading and quality assurance practices. The grading school uses current research and problem solving in realistic situations. Participants receive research-based information on grading, equipment calibration, food safety and best management practices. The program requires that participants use equipment for hands-on exercises to illustrate best practices. An activity-based pretest establishes a baseline of knowledge and an activity-based posttest provides an immediate feedback loop for participants to show knowledge gain. Follow-up contact with producers has provided long-term impacts and input for refining the school experience and preparing additional learning materials that emphasize grading and quality best management topics.

National Finalists

INVASIVE SPECIES LESSON IN PESTICIDE TRAINING WORKSHOPS

Wyatt, G.J.*¹, Herzfeld, D.*², Haugen-Brown, T.*³

¹ Extension Educator, University of Minnesota, Mankato,
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² Pesticide Safety & Environmental Ed Program Coordinator,
University of Minnesota, St. Paul, MN, 55108

³ Pesticide Safety & Environmental Ed Program Coordinator,
University of Minnesota, St. Paul, MN, 55108

There is a growing number of invasive species in Minnesota. These invasive species (insects, plants, etc.) are found in all landscapes including our rural and agricultural areas. In an effort to educate farmers about important invasive species which can affect farmer's income and environment, it was determined to conduct a short presentation during the private

pesticide applicator workshops for farmers. Private pesticide applicator workshops are held in the winter months throughout the agricultural regions of Minnesota. These meetings give an update of new pesticide regulations, safety practices and pesticides. The workshops are required to update individual farmer's license to apply pesticides and are well attended. We focused on four invasive species affecting rural areas: Emerald Ash Borer (affecting Ash trees in windbreaks, rural communities and widely planted in farming regions), Brown Marmorated Stink Bug (affecting over 300 plants including apple trees, grapes, corn and soybeans) Buckthorn (a small tree which is host to the over wintering soybean aphid and found in windbreaks and woodlands throughout the state) and Oriental Bittersweet (an extremely invasive perennial vine which changes the understory of windbreaks and woodlands). Workshop topics included history, life cycle, identification, damage and control. Free ID cards and handouts were available. A similar presentation was added to the Ag Professional pesticide trainings. Over 1,184 farmers and commercial pesticide applicators attended trainings in 2014. After the training, 93.1% were more knowledgeable about invasive species. Over 73.5% of participants expressed that this topic was new. This program can be replicated in other states.

ALABAMA AND FLORIDA EXTENSION AGENTS PARTNER TO OFFER THE BEACHES TO WOODLANDS PRE-TOUR AT THE MOBILE AM/ PIC

Barrill, A.*¹, Dorrie, M.*², Dunning, S.*³, Hendrix, R.*⁴,
Johnson, L.*⁵, Matthews, H.*⁶, O'Connor, R.*⁷, Stevenson,
C.T.*⁸, Verlinde, C.*⁹

¹ Regional Forestry and Natural Resource Agent, Alabama
Cooperative Extension System, Jasper, AL, 35501

² Tour Operator and Nature Interpreter, 5 Rivers Delta Safari,
Spanish Fort, AL, 36527

³ Commercial Horticulture and Natural Resource Agent, UF/
IFAS Extension Okaloosa County, Crestview, FL, 32539

⁴ Private Forester, Molino, FL, 32577

⁵ EXT AGT II, AGRICULTURE, UF/IFAS Extension
Escambia County, Cantonment, FL, 32533

⁶ Longleaf Pine Landowner, Matthews Timber, Atmore, AL,
36504

⁷ Sea Grant agent, UF/IFAS Extension Escambia County,
Cantonment, FL, 32533

⁸ Coastal Sustainability Agent, UF/IFAS Extension Escambia
County, Cantonment, FL, 32533

⁹ Sea Grant agent, UF/IFAS Extension Santa Rosa, Milton,
FL, 32570

University of Florida Extension and Alabama Cooperative Extension agents worked to design, teach, and evaluate a program to highlight the unique ecosystems found in lower Alabama. Objectives: 1) Introduce unique ecosystems and natural and cultural history of the Northern Gulf Coast region to a minimum of 10 Extension agents field experiential learning and 2) Enable those agents to gather and synthesize information (like the Florida Master Naturalist techniques

and curricula) which can be incorporated into Extension programming across multiple disciplines nationwide. The 1 ½ day event was an experiential-learning style, group excursion in which attendees received instruction on the natural and cultural history of the region. It was led by a combination of Extension agents, private landowners, forest managers, and professional eco-tour guides. Emphasis was placed on explaining public and privately-owned natural resource management and the economic impact associated with proper planning. Participants visited a coastal barrier island, upland seepage bog, privately owned longleaf plantation, Mobile Tensaw River delta, and Bottle Creek Indian Mound. Fourteen (14) participants from 6 states attended. Seven (of 14) responded to an emailed post-tour survey. One hundred percent (100%) of the responding attendees (7/7) indicated they increased their knowledge of pitcher plants, the Mobile River delta and watershed, longleaf pine and fire ecology, local Indian history, gopher tortoises, sea life, and cogongrass. Participants indicated that they have shared the newly acquired information with clientele and colleagues and will integrate the new information into programming (like the 4-H Wildlife Habitat program).

NEVADA YOUTH RANGE CAMP

Brad Schultz*¹, Foster, S.S.*², Kent McAdoo*³

¹ Extension Educator, University of Nevada Cooperative Extension, Winnemucca, NV, 89445

² Extension Educator, University of Nevada Cooperative Extension, Lovelock, NV, 89419

³ Natural Resource Specialist, University of Nevada Cooperative Extension, Elko, NV, 89801

Since 1961, The Nevada Youth Range Camp has provided a week-long camping and instructional experience for high school-age youth from across Nevada and occasionally North-eastern California. Nevada Youth Range Camp goals focus on relationships between people and rangeland. Campers learn that land managers need information about plants, wildlife, water and soil to make good decisions about rangeland management and use. They learn basic skills about rangeland and resource management and explore career opportunities in these fields. The camp challenges youth to explore resource problems and create logical solutions. A summative evaluation of the camp's educational program was conducted to measure participant's gains in knowledge for the major curriculum topics. Behavior/attitude changes of participants towards appreciation of Nevada's rangelands, possible career goals and their future involvement in public rangeland issues were also evaluated. An increase in knowledge was evident in all areas tested, ranging from 10 to 54 percent increase in test scores between the pre-test and post-test. In addition, changes of behavior/attitudes were documented with an improvement in the camper's appreciation for Nevada's rangelands ranking the highest.

State Winners

MOBILE BAY OYSTER GARDENING PROGRAM

Waters, Jr., P.L.*¹

¹ Extension Specialist, Alabama Cooperative Extension System, Mobile, AL, 36602

Volunteer Gardeners of the Mobile Bay Oyster Gardening Program have grown more than 600,000 advanced stocker sized oysters for restoration, established a 10 acre oyster sanctuary and launched the Oyster Trail in Mobile and Baldwin Counties. This citizen driven, Extension supported effort addresses reef damage and the corresponding loss of ecosystem services provided by oyster reefs in Mobile Bay and the Mississippi Sound.

Students to retirees volunteer to raise juvenile oysters from June through November in protective gardens before returning them to the wild. There, they will spawn, and provide tens of millions of additional larvae for the overall estuarine system.

To extend the reach of this project, and further the message of the dynamic role oysters play in our coastal culture, economy and ecology, The Oyster Trail was launched. Now, with more than 20 stops around Mobile Bay, the Trail serves as a visible reminder of the ongoing services provided by our molluscan assets. Through a scavenger hunt for knowledge (and prizes), visitors and locals come face to face with GIANT oysters, and begin to better understand the value of oysters beyond their culinary attributes. With proceeds from the Trail going back into the restoration efforts of the Mobile Bay Oyster Gardening Program's volunteer Gardeners, individual and corporate citizens have come together for the common good; to enjoy, protect and grow our natural resources which we have come to rely on for work and recreation.

NITROGEN CONCENTRATION IN RICE FLOODWATER FOLLOWING FERTILIZATION

Beckwith, G.*¹, Daniels, M.B.*², Hallmark, C.R.*³, Hesselbein, J.L.*⁴

¹ CEA-AGRI, , Stuttgart, AR, 72160

² Professor, Environmental Management - Extension, University of Arkansas Division of Agriculture Cooperative Extension Service, Little Rock, AR, 72204

³ Discovery Farm Technician, University of Arkansas Division of Agriculture Cooperative Extension Service, Little Rock, AR, 72204

⁴ Discovery Farm Technician, University of Arkansas Division of Agriculture Cooperative Extension Service, Little Rock, AR, 72204

Agriculture is considered to be a leading source of nutrients delivered to the Gulf of Mexico and thus contributing to the hypoxia issue. Arkansas is the leading rice-producing state in the nation. Besides the environmental concerns, rice farmers are looking for ways to be more efficient in nutrient applications due to high fertilizer prices. In Arkansas, nitrogen is typically applied in split applications with the first application

before first flood and a second mid-season application where the nitrogen is directly applied to flooded fields using aerial application. Previous plot-scale studies have shown that nitrogen concentrations in flooded rice fields can dissipate in a matter of days. The purpose of this study was to determine changes in nitrogen concentration in rice floodwater following fertilizer applications on a commercial rice field. To determine how the concentration of nitrogen in rice floodwater changes and how long it takes it to move into the soil, water samples were collected using Sigma 900 automated water samplers located in three different rice bays within a private, commercial rice field. Samples were collected initially at 1 hour intervals and decreased to once a day from day five to fourteen. Samples were processed in the field and shipped to the Arkansas Water Resources Center lab for analysis. The results indicate that rice fields act as a wetland and nitrogen concentration in the floodwater decreases rapidly and after a few days and the concentration is less than two thirds of most streams in agricultural watersheds in the United States.

Search for Excellence in Landscape Horticulture National Winner

FLORIDA-FRIENDLY LANDSCAPING™ PROGRAM: THE GREEN INDUSTRIES BEST MANAGEMENT PRACTICES

Rainey, D.P.*¹, Momol, E.A.*², Trenholm, L.E.*³, Bain, C.J.*⁴, Wichman, T.A.*⁵, Bossart, J.M.*⁶, Marvin, J.W.*⁷, Ylisastigui, P.P.*⁸, Jacques, M.E.*⁹, Lewis, C.E.*¹⁰, Thomas, M.A.*¹¹, Rivera, H.G.*¹², McLeroy, C.A.*¹³, Snyder, M.S.*¹⁴, Scheinkman, M.M.*¹⁵, Chavez, A.E.*¹⁶, Asuaje, C.A.*¹⁷

¹ Statewide Coordinator: Green Industries Best Management Practices, University of Florida/IFAS, Sarasota, FL, 34241

² Director: Florida Friendly-Landscaping(TM) Program, University of Florida/IFAS, Gainesville, FL, 32611

³ Urban Turfgrass Specialist, University of Florida/IFAS, Gainesville, FL, 32611

⁴ Web/IT Coordinator: Florida Friendly-Landscaping(TM) Program, University of Florida/IFAS, Gainesville, FL, 32611

⁵ State Coordinator: Master Gardener Program, University of Florida/IFAS, Gainesville, FL, 32611

⁶ Information Specialist: Florida Friendly-Landscaping(TM) Program, University of Florida/IFAS, Gainesville, FL, 32611

⁷ Database Specialist: GI-BMP/Florida Friendly-Landscaping(TM) Program, University of Florida/IFAS, Gainesville, FL, 32611

⁸ Translation Specialist: GI-BMP/Florida Friendly-Landscaping(TM) Program, University of Florida/IFAS, Gainesville, FL, 32611

⁹ Creole Translation: GI-BMP/Florida Friendly-Landscaping(TM) Program, University of Florida/IFAS, Gainesville, FL, 32611

¹⁰ State Coordinator: Florida Yards and Neighborhoods, University of Florida/IFAS, Gainesville, FL, 32611

¹¹ Program Coordinator: Nonpoint Source Management Section, Florida Department of Environmental Protection, Tallahassee, FL, 32399

¹² GI-BMP Regional Coordinator, Florida Department of Environmental Protection, Tallahassee, FL, 32399

¹³ GI-BMP Regional Coordinator, Florida Department of Environmental Protection, St. Augustine, FL, 32092

¹⁴ GI-BMP Regional Coordinator, Florida Department of Environmental Protection, Naples, FL, 34113

¹⁵ Grants Manager, Florida Department of Environmental Protection, Tallahassee, FL, 32399

¹⁶ GI-BMP Regional Coordinator, Florida Department of Environmental Protection, Naples, FL, 34113

¹⁷ Regional Specialized Extension Agent, University of Florida/IFAS, West Palm Beach Extension, West Palm Beach, FL, 33415

Florida's wet climate and distinctive geology provide a wealth of water resources, but these are at risk for increasing degradation as the state's population steadily rises. Fertilizer and pesticide runoff from farms and suburban and urban landscapes causes more than 60 percent of nonpoint source pollution. To better control potential pollutants from suburban and urban sources, Green Industries Best Management Practices (GI-BMP) training targets landscaping professionals who apply fertilizers and pesticides on a daily basis. Administered under the UF/IFAS Florida-Friendly Landscaping™ (FFL) Program, in partnership with the Florida Department of Environmental Protection (FDEP), GI-BMP training comprises six learning modules, all covered in a one-day session, that address efficient water and fertilizer use, integrated pest management (IPM), and lawn and landscape cultural practices. More than 400 certified instructors, consisting of Extension Agents, industry and government agency representatives, and other volunteers, provide in-person classes at Extension offices and other locations around the state. These instructors have provided more than 1,430 training classes in English, Spanish and Creole since 2009. Training is also available online and through DVD. This statewide UF/IFAS Extension program enhances water quality awareness by delivering science-based information, skills, and tools to address potential nonpoint source pollution related to landscape business practices. Coupled with education and regulatory requirements, effective education and professional certification for those in commercial fertilization and landscape management may yield significant improvements in surface and groundwater systems by reducing nonpoint source pollution.

National Finalists

NATURALLY SMART HORTICULTURE EDUCATION SERIES

Huckabay, E.K.*¹, Miles, J.D.*²

¹ Regional Extension Agent, Alabama Cooperative Extension System, Mobile, AL, 36608

² Regional Extension Agent, Alabama Cooperative Extension System, Mobile, AL, 36608

The purpose of the Naturally Smart Horticulture Series was to educate home gardeners about sustainable gardening practices they could implement in order to grow their own food. A list of monthly topics was compiled using commonly asked questions received in the Extension office and on the Master Gardener Helpline. Educational objectives for the series were to increase participants' knowledge and adoption rate of sustainable gardening practices. Classroom and hands-on activities were used to teach the sessions; and participants were encouraged to bring their own personal questions or issues to class so that each session was truly tailored to the audience. Instructors for the series included agents from different programming areas, local experts, Master Gardener volunteers, and state Extension Specialists. Participants indicated that their knowledge of trap crops, garden planning, and non-chemical pest control options increased 100% from before the class to after the class. Knowledge about cost savings of drip irrigation and the importance of rainwater collection for storm water management increased 89%. And the knowledge of the importance of soil testing increased 79%. Participants also indicated that they would change some gardening behaviors. Sixty-five percent of respondents indicated they would start having a soil test prior to applying fertilizers; 88% said they were already or would begin using drip irrigation; 58% would begin reducing practices such as tilling to protect soil structure; and 100% are or would begin adding organic matter to soils to improve soil health.

GARDENING A-Z

Banks, S.*¹

¹ Horticulture Agent, Smithfield, NC, 27577

With the increased interest in the backyard garden, I was asked by the director of Clayton Parks and Recreation if I would create a class for new and veteran gardeners who wanted to learn how to produce vegetables in a home garden. The class would target beginning gardeners and gardeners who have recently moved to the area and need to adjust to our unique growing environment. Over the past three years I have produced several presentations, a few videos, one publication, and gathered materials and resources from other sources to pass out as supplemental materials during the class. The class is run three times each year in spring, summer, and fall to cover our three growing seasons. Students receive hands on experience in the demonstration garden each week as well as a 15 to 30 minute presentation. The class is meant to give

participants ample opportunities to ask questions and gain experience that can be used in their own gardens. Class size ranges from 8 to 20 depending on the season. In 2014 there were 33 people who took the class and receive the training and materials. As the teacher of the class, I put together all but one of the presentations, the videos that are included on the disk, and the publication "Gardening 101" found in the Site Selection section.

FORT PECK TRIBAL EXTENSION GARDEN

Becker, W.¹

¹Fort Peck Reservation Extension Agent, Montana State University, Poplar, MT 59255

The Fort Peck Reservation Extension Office developed an educational program based on rural agri-tourism, working with cultural educational customs, and horticulture practices of Northeastern Montana. The Fort Peck Reservation Tribal Executive Board gave use of 99 acres of land owned by the Tribes to the MSU Extension-Fort Peck Reservation, for educational functions. The purpose of this project was to showcase what horticulture there is on the Fort Peck Reservation and help those people who grow gardens, landscape, or purchase horticulture products with networking possibilities. Grants were awarded to help the program activities used to achieve the goals of this project: which were horticulture tours which encompassed businesses, and local garden and landscape enthusiasts, a pumpkin patch, garden food preservation, a rain barrel workshop, and berry picking. A large garden was grown and showcased, and then all of the produce was given to the Tribal Elderly Program, community members that had lost their gardens from adverse weather conditions or hard times, and to supplement other healthy programs that were directed from the Fort Peck Reservation Extension Office. Over 850 people benefited from the activities provided from these 9 activities over the course of the last three years. Program participants indicated that the information obtained was invaluable for feeding their families, conserving water, sharing ideas, networking with other horticulturists, and was deemed highly successful.

State Winners

LANDSCAPE DESIGN MADE SIMPLE

Hancock, J. *¹

Horticulture Extension Agent, Kansas State University, Topeka, Kansas 66604

There's an overwhelming interest by the public in landscape design. Classes have waiting lists and people begging for extra classes to be offered. The unfortunate thing is most landscape design classes offer traditional training and still leave the homeowner with no idea how to "fix" their yard. Jamie was challenged to find a way to teach landscape design that the agents and Master Gardeners, with no background in landscape design, could use to effectively help the large number of clients

requesting their services. Clients are generally homeowners, commercial designers and landscape installers. The classes are taught in several formats using Power Point presentations and handouts. For the homeowner, three-three hour classes are given over three weeks with homework (drafting tools and paper are included) and one-on-one attention. Format two is for new Master Gardener training and is taught in one-three hour session with several hands-on assignments. The third format is a two hour session given to professionals with landscape background and only covering the main points. Landscape Design Made Simple has been taught in each of these formats to hundreds of people at the county, state, national and international level. The results have been phenomenal. Numerous homeowners and commercial people, report that they not only know what to do to “fix” their yards, they are putting the “fix” into practice. This makes landscape design simple.

AT-RISK YOUTH LEARN ABOUT HEALTHY CHOICES AND HOW TO GROW HEALTHY FOOD.

Weinmann, T.*¹

¹ CASS COUNTY EXT HORTICULTURIST, , Fargo, ND, 58108

According to the Centers for Disease Control and Prevention, in North Dakota, 92% of children do not eat enough vegetables to maintain a healthy diet. Nine hundred eleven at-risk youth, identified by the Expanded Food and Nutrition Education Program and Family Nutrition Program standards, desired to learn how to succeed at growing their own healthy food. These children had the opportunity to grow their own cherry tomatoes in the spring of 2014 in Cass County, North Dakota. Children from 52 classrooms and nine different schools participated in a two-part gardening lesson taught by dietitian Nicole Johnson and myself. I taught them the importance of: photosynthesis, fertilizer, watering correctly, potential insect and disease issues, timing of planting seeds, sunlight and placement of their plant, and following the label on a seed packet.

53% participated in planting a garden last spring.

94% transported the plant home.

54% transplanted their tomato.

54% harvested from their tomato.

54% consumed fruit from their tomato.

CREATING NATIVE MEADOW HABITAT IN STORMWATER DETENTION BASINS TO PROVIDE AN URBAN POLLINATOR REFUGE

Haberland, M.*¹, Ingerson-Mahar, J.*², Apgar, R.*³

¹ County Environmental Resource Mgmt Agent, Rutgers Cooperative Extension, Cherry Hill, NJ, 08002

² IPM Coordinator, Vegetable, Rutgers University Pest Management Office, New Brunswick, NJ, 08901

³ Council Member, Eastampton Township, Eastampton, NJ, 08060

We examined habitat use by pollinator species between a

mowed turf and an unmowed naturalized area within a dry stormwater detention basin. Detention basins are designed for flood control and typically maintained with turf type vegetation. Threatened by habitat loss, disease and pesticide use the numbers of native pollinators and commercial bee populations have been in decline. Naturalizing basins using native herbaceous wildflower vegetation provides an increase in pollinator habitat while also incorporating storm water quality benefits. Allowing the native vegetation to grow and flower enables pollinators to utilize this small scale urban/suburban pollinator “urban refuge,” for feeding, habitat, and reproduction. In this study we compared two 600 square foot plots within a 1-acre mowed detention basin, laid out at opposite ends. One plot is planted with native herbaceous meadow vegetation, mowed once in the fall, while the other plot is fescue turf grass, mowed down to 1.5 inches every two weeks during the growing season. Pollinator samples were collected every two weeks using pan traps and sweep nets on alternate days. Pollinators were identified to genus or species level, and enumerated; plot type usage was compared and typical forage distance estimated by genus. Results after two years show foraging in our basin by the honey bee and 4 genera of native bees. The naturalized area vegetation was preferred (90%, n = 194), versus mowed turf (10%, n = 22). Foraging distance was calculated using intertegular distance, and ranged from 7.8 m to 9766 m for all genera combined.

JACKSON COUNTY MASTER GARDENERS

Hiller, M.R.*¹

¹ CEA-AG/NR JACKSON CO., , Edna, TX, 77957

Home landscapes, turfgrass, and fruit and vegetable gardening are important to the quality of life of citizens in Jackson County. Many people enjoy managing home gardens and landscapes. These outdoor activities not only add to the quality of life but also maintain and improve property values. The Jackson County Master Gardeners suggested that educating the public with reliable, nonbiased information and assistance on these topics would benefit the citizens and the value of Jackson County.

Jackson County Master Gardeners held 8 “Come Grow With Us” educational events reaching 151 people. At Ag Day, they reached over 249 4th grade students. At their Texana Educational Gardens, they reached 56 kids and 24 adults. The Master Gardeners have completed over 1100 hours of volunteer service for this year, which amounts to over \$26,413 dollars-worth of in-kind service to the community.

Search for Excellence in Livestock Production

National Winner

BEST MILKING PRACTICES- “ON FARM” CULTURING

Yutzy, A.*¹, Strait, G.*²

¹ Extension Educator, Penn State University, Huntingdon, PA, 16652

² Associate Extension Educator, Penn State University, McConnellsburg, PA, 17233

Mastitis is an inflammation of the mammary gland and is prevalent in dairy herds around the world. Mastitis can be caused by a wide range of bacterial pathogens. Clinical mastitis is one of the most costly diseases affecting the dairy industry, with recent estimates suggesting each case associated with a \$231-\$289 loss. Producers suffer economic loss through reduced production, discarded milk, veterinarian services, culling cows, and treatment use. Mastitis is associated with the most frequent antibiotic use in dairy cows. One study found that milk discarded due to antibiotic treatment could exceed \$100 per cow per year. Antibiotics are frequently used to treat clinical mastitis, however often times antibiotics are either ineffective or not needed to treat the disease. Producers that use unnecessary antibiotics lose profit due to discarded milk and can contribute to antibiotic resistance. Due to this problem, dairy producers need to be more aware of what they are treating. This will help them make better treatment decisions in turn making the farm more sustainable. Penn State Dairy Extension Educators obtained a NE SARE partnership grant to work with eight producers across the state of Pennsylvania to implement the use of “on-farm” milk culturing. Educators also presented information through field days, producer meetings and hands on workshops. As a result of these programs, 75% of participants have decreased antibiotic use as well as increase profits on their farm.

National Finalists

MONTGOMERY COUNTY WINTER FEED PROGRAM AND HAY SHOW

Mcginley, B.*¹

¹ CEA-Ag, University of Arkansas Division of Agriculture, Mount Ida, AR, 71957

Winter feed costs are the largest expense for cow/calf producers. One way to reduce these costs is to have hays analyzed for nutrient content, and develop a least cost, supplemental feeding program based on hay quality. Bermudagrass hays in Arkansas average 13% protein, but can range from 6% to 22%. This variability can lead to under or over feeding nutrients causing poor growth rates or unnecessary expenses. The Montgomery County Hay Show and Winter Feed Program was started to help producers develop least cost supplemental feeding programs. Producers were allowed to test up to five lots

of hay for \$20 (\$90 value) and then educated on how to manage a feeding program based on their hay test results. Individual ration formulation was also available to producers. Hays were judged for quality and ranked with a color coded system based on its ability to meet a cow’s nutritional requirement. This system allowed producers to visually appraise each hay, while educating them about its nutrient content. Following this program, participants indicated an increase in knowledge of beef cattle nutritional requirements, matching supplements to hay quality, and understanding a feed analysis report by 42%, 48%, and 54%, respectively. In addition, 26 participants indicated they would start using hay tests on a regular basis and would start selecting a supplement based on hay quality. A follow up evaluation showed participants saved \$33,082 in winter feed costs as a result of the hay testing program.

NORTHWEST FLORIDA BEEF CONFERENCE AND TRADE SHOW

Mayo, D.*¹, Mauldin, M.*², Eubanks, S.*³, Grant, H.*⁴, Carter, R.*⁵, Goodchild, M.*⁶, Lamb, G.*⁷, DiLorenzo, N.*⁸, Blount, R.*⁹, Dubeux, J.*¹⁰

¹ County Extension Director III, Jackson County Extension, Marianna, FL, 32448

² Agriculture Agent, Washington County Extension, Chipley, FL, 32428

³ County Extension Director, Holmes County Extension, Bonifay, FL, 32425

⁴ County Extension Director, Gadsden County Extension, Quincy, FL, 32351

⁵ County Extension Director, Gulf County Extension, Wewahitchka, FL, 32465

⁶ County Extension Director, Walton County Extension, DeFuniak Springa, FL, 32433

⁷ Beef Reproduction Specialist, North Florida Research and Education Center, Marianna, FL, 32446

⁸ Beef Nutrition Specialist, North Florida Research and Education Center, Marianna, FL, 32446

⁹ Forage Breeder, North Florida Research and Education Center, Marianna, FL, 32446

¹⁰ Forage Management Specialist, North Florida Research and Education Center, Marianna, FL, 32446

The Northwest Florida Beef Conference and Trade Show is a regional extension educational program for cattle producers that has been held in the Panhandle of Florida for the past 30 years. The purpose of the program is to provide cattle ranchers with knowledge gain of recommended management practices, as well as actual practice changes to reduce costs or increase profitability of their ranches. Annually six beef cattle or forage specialists provide research based presentations to help cattle ranchers improve the efficiency of their operations. Each year the planning committee chose a theme and then topics and presenters based on the theme. In addition, representatives from private companies and government agencies that provide products and services to cattle ranchers in the region, supply both sponsorship of the event and a representative for the trade show which allowed for interaction with participants during scheduled times on the agenda. The lead Agent annually

served as the chair of the planning committee, developed the educational program, solicited the sponsorship, coordinated the marketing efforts, served as the moderator, and created and implemented the evaluation tool. Exit surveys were used to document the success of programs and of actual practice adoption of information presented the previous year. Over the past three years, exit surveys of ranchers indicated: 92-95% of participants gained knowledge of recommended management practices, 73-85% planned to make practice change, and 82-85% said they had made changes to their operation based on information presented the previous year.

LIVESTOCK PRODUCTION PROGRAMS IN DEKALB COUNTY

Barry, M.*¹

¹ Extension Director, UT Extension - DeKalb County, Smithville, TN, 37166

The purpose of the livestock production program in DeKalb County was to educate producers and increase their profitability in beef and forage production areas. The educational objectives of the livestock production program in DeKalb County were to provide educational opportunities for beef cattle producers on timely topics, offer the Advanced Master Beef Program, train producers in Beef Quality Assurance (BQA), create a DeKalb County Cattlemen's Association, offer field days and other hands on related educational events, as well as market UT Extension. To accomplish these objectives, the agent conducted a variety of teaching methods, including: group educational meetings, field days, one on one meetings with producers, newsletters and radio programs. Numerous topics were covered over the past three years, including: Advanced Master Beef Producer Program, Beef Quality Assurance classes, Private Applicator Pesticide recertification classes, creation of the DeKalb County Cattlemen's Association, group meetings and field days on beef and forage topics, Tennessee Agriculture Enhancement Program meetings, quarterly newsletters, and a regular live radio program. The population of DeKalb County is approximately 18,700, and there are 637 farms in the county. The agent conducted, authored, or collaborated on all UT Extension educational programs on beef and forage topics in DeKalb County.

State Winners

PASTURE AND WATER MANAGEMENT FIELD DAY

Boyle, R.*¹, Cates, N.*², Miller, C.*³

¹ Agriculture/4-H Youth Agent, Kansas State University, Stockton, KS 67669

² Livestock Agent, Kansas State University, Beloit, KS 67420

³ Agriculture/4-H Youth Agent, Kansas State University, Phillipsburg, KS 67661

Drought is a condition Kansas farmers and ranchers know they may have to deal with once every five years or so. However, the current drought has been affecting some areas of the state for the past three years consecutively. To address drought issues on rangeland, a Pasture and Water Management Field Day was organized in two areas of Northcentral Kansas. The Pasture and Water Management Field Day was held April 22, 2014. A morning session was held in Phillips County and an afternoon session was held in Mitchell County. A total of 36 beef cattle producers were reached utilizing a variety of teaching methods. Participants now have the knowledge to change their typical production practices so they can preserve grass and water resources for the future.

DEVELOPING A SUCCESSFUL FIELD NIGHT THROUGH COLLABORATION

Moore, J.*¹, Bruynis, C.L.*², Fisher, J.C.*³, Dugan, D.A.*⁴, Bergefurd, B.*⁵, Grimes, J.F.*⁶, Apsley, D.*⁷, Wells, K.*⁸

¹, OSU Extension, Gallipolis, OH, 45631

² Extension Educator,, The Ohio State University Extension, Chillicothe, OH, 45601

³ Extension Educator, The Ohio State University, Piketon, OH, 45661

⁴ Extension Educator, The Ohio State University, West Union, OH, 45693

⁵ Extension Educator, The Ohio State University, Portsmouth, OH, 45662

⁶ Extension Beef Coordinator, The Ohio State University, Piketon, OH, 45661

⁷ Extension Woodlands Management, The Ohio State University, Jackson, OH, 45640

⁸ Branch Manager, Ohio Agriculture Research and Development Center, Jackson, OH, 45640

Ohio State University (OSU) Extension reorganized creating an environment where educators were encouraged to work cooperatively in defined Extension Education and Research Areas that encompassed 9 to 10 counties. Local educators identified the need to work cooperatively with the Ohio Agricultural Research and Development Center (OARDC), Jackson Branch, to deliver an annual field night focusing on topics important to the cattle industry in Ohio. Working cooperatively, OSU Extension and OARDC created a strategy to develop and grow a field night event to provide educational programming to cattle producers in the region. This included the identification of potential participants, developing a marketing strategy, getting producer buy-in of the program, measuring learning, and using participant feedback to develop future programs. All these efforts collectively led to the success and growth of the Jackson Beef and Forage Field Night. Attendance increased by 120% from year 2012 to 2014. Knowledge gain, reported on a six point Likert scale, ranged from 0.68 to 2.47 on key learning objectives with an average knowledge gain of 1.44 in 2012, 0.93 in 2013, and 1.70 in 2014. Another important outcome of this program is it has elevated the importance of both OARDC and OSU Extension to cattle producers in the region.

DEVELOPING OPTIONS FOR DIRECT MEAT MARKETING

Pless, Jr., C.D.*¹

¹ Agricultural Agent, Livestock, NCSU, Concord, NC, 28026

The purpose of this educational program was to develop an area livestock harvest facility to give livestock producers an option of marketing their animals as meat rather than in addition to selling the live animal at auction or in truck load lots direct to feedlots. I accomplished this by verifying producer interest in selling their animals as meat by a survey mailed to producers in Cabarrus and surrounding Counties. Once interest was established, I assisted Cabarrus County in successfully applying for a North Carolina Farmland Preservation and Agricultural Development grant for \$625,000. I conducted educational meetings on new cuts of beef, adding meat sales to the farm business and managing pastures for the production of the higher quality forage necessary to finish cattle on grass. Farmers have increased net income per animal by marketing the animal as meat rather than as a live animal. Meat customers are able to purchase and eat locally produced, harvested, processed and packaged meat.

JACKSON COUNTY BEEF & FORAGE EDUCATION

Hiller, M.R.*¹

¹ CEA-AG/NR JACKSON CO., , Edna, TX, 77957

Beef cattle production and the utilization of forages for grazing and hay production continues to be in the top three of agricultural income in Jackson County. Educational efforts conducted in response to issues identified from our Jackson County AgriLife Extension Beef & Forage Committee in 2014 have involved a number of teaching methods to provide needed information to producers. Issues included Ag Literacy, Brush control, understanding animal behavior and continuing education units for private applicators. An AgriNews letter, news columns, bi-weekly radio programs, group meetings, and many individual contacts have all been used successfully to this end.

Jackson County Beef & Forage Committee held their Second Annual Premium Bull & Replacement Female Sale. Gross sales receipts totaled over \$390,000, which was a big economic success for the county. 135 people attended the sale. A live demonstration of "low-stress cattle handling" educational event with Herman Detering was held on Saturday morning before the sale. On his website of: www.hermandetering.com he has posted a link to several utube videos which were recorded at Brackenridge Main Event Center in Edna. A demonstration to control hushache was applied in the fall of 2013. Four protocols were applied for this trial. A tour took place September 23, 2014, to show results to the public. 24 people from several counties came to the tour. A seminar was held October 27 on wills, trusts and estate tax planning. 21 people attended.

LOW STRESS CATTLE HANDLING AND WEANING TRAINING; ITS EFFECTS ON WEIGHT GAIN AND ACTIVITY IN CALVES POST-WEANING

Ligon, J. M.*¹

¹ ANR Extension Agent, VA Cooperative Extension, Buckingham, VA, 23921

Research has demonstrated that handling practices can have a significant positive or negative impact on cattle performance, health, and farm profitability. Low-stress handling techniques have been shown to positively impact immune response to vaccinations (thus, lowering sickness and death losses) and to increased carcass value by decreasing quality problems such as dark cutters and bruising. Based on low-stress handling research conducted by the Agent, direct benefits to cattle producers included a reduced stress response during the weaning process, observed by reduced steps per hour of 500 to 1200 steps for the first three days when compared to conventionally handled and weaned calves. This resulted in a post-weaning gain improvement of 20 pounds per calf. These positive impacts can significantly improve profit \$44 to \$400/feeder calf. For producers to fully understand low stress handling techniques they must see them demonstrated with live animals. To address this, the agent filmed, edited and published video demonstrations on topics such as animal behavior, weaning, and low-stress handling. The agent used Adobe Presenter 7 to record a voice overlay on videos and presentation slides that are incorporated into the Microsoft PowerPoint 2010 presentations. Live and video/PowerPoint presentations were given at multiple workshops across the state from the fall 2013 to present. Approximately 900 adult and youth beef producers were targeted at these events. Ligon edited, published and presented the videos and presentations. Additionally, YouTube videos of the agent's handling technique demonstrations received 115 views thus far, from those viewing in the convenience of their home.

NEW MEXICO YOUTH RANCH MANAGEMENT CAMP

Ashcroft, Nick*¹, Blandford, Jack*², Cram, Doug*³, Dean, Tom*⁴, Dominguez, Tom*⁵, Eaton, Summer*⁶, Hawkes, Jerry*⁷, Lucero, Steve*⁸, Marez, L.A.*⁹, Serna, Sonja Jo*¹⁰, Smallidge, Sam*¹¹, Torres, Patrick*¹², Ward, Marcy*¹³, Wenzel, John*¹⁴, Clavel, Blair*¹⁵

¹ Range Management Specialist, NMSU-CES, Las Cruces, NM,

² Luna County Program Director/Ag and 4-H Agent, NMSU-CES, Deming, NM,

³ Wildland Fire Specialist, NMSU-CES, Las Cruces, NM,

⁴ Southwest District Director, NMSU-CES, Las Cruces, NM,

⁵ Otero County Extension Agent, NMSU-CES, Alamogordo, NM,

⁶ Wildlife Program Assistant, NMSU-CES, Las Cruces, NM,

⁷ Department Head, Extension Animal Sciences and Natural Resources, NMSU-CES, Las Cruces, NM,

⁸ Sandoval County Extension Agent, NMSU-CES, Bernallio, NM,

⁹ AG AGENT / COUNTY DIRECTOR, NMSU, Santa Rosa, NM, 88435

¹⁰ IT Multimedia Specialist, NMSU, , ,

¹¹ Wildlife Specialist, NMSU-CES, Las Cruces, NM,

¹² Northern District Director, NMSU-CES, , ,

¹³ Extension Livestock Specialist, NMSU-CES, Las Cruces, NM,

¹⁴ Extension Veterinarian, NMSU-CES, Las Cruces, NM,

¹⁵ Harding County Extension Agent, NMSU-CES, Roy, NM,

The New Mexico Youth Ranch Management Camp (NMYRMC) started in 2011 as an effort to address the fact that nationally, the average age in the ranching community continues to increase as more young people opt to leave the ranch for careers outside of production agriculture. As a result, the fabric of rural economics, as well as our ranching tradition stands to be lost. In a rural state like New Mexico, these are significant implications.

The next generation will face a multitude of business-based production, environmental, and economic challenges. The NMYRMC is tailored to introduce 15 to 19 year old participants to new science-based concepts, advanced technologies, and applied skills, used successfully on commercial beef cattle operations to increase long-term sustainability. Youth leave this experience with an expanded toolbox of new skills, practices, and an appreciation on how their newly acquired skills and practices relate to the cash flow of a ranch in the Southwest.

NMYRMC is designed by New Mexico State University, Cooperative Extension Service County Agents and CES Agriculture and Natural Research Specialists. NMSU professionals pull resources from a wide variety of industry expertise to train these youth in the aforementioned practices, concepts, and hands-on skill development, including: Agriculture Industry professionals, Research and Development professionals, and, Agriculture and Natural Resource Agency professionals. Many of these professionals donate their time to this week long educational effort.

THE ANNUAL COWMANS' REPRODUCTION WORKSHOP

Heaton, K.*¹

¹ Agriculture/4-H Youth Agent, UTAH STATE UNIVERSITY, Panguitch, UT, 84759

Over 20,000 beef cattle reside in the rural counties of Kane and Garfield Counties in southern Utah. In fact, livestock outnumber the people. Interestingly enough, there are no full-time veterinarians dedicated to help beef producers with reproduction issues. In 2008, ranchers requested Utah State University (USU) Extension to provide a pregnancy diagnosis workshop to help beef producers manage their livestock more effectively. In 2008, USU, in collaboration with University of Arizona and Southern Utah University hosted a two day pregnancy diagnosis workshop with over 45 participants attending from Utah, Arizona and Nevada. Shortly after the workshop, the Utah Veterinarian Association protested the workshop claiming that USU Extension had over-reached its mission and had violated the Utah Veterinary Practice Act. Recognizing the need for continued reproduction education,

USU Extension agreed to follow the current laws and regulations, and continue hosting reproduction workshops. The name of the workshop was changed from "The Cowmans' Pregnancy Diagnosis Workshop" to "The Annual Cowmans' Reproduction Workshop (CRW)". This grassroots educational effort has continued each year since 2008 and has reached 357 participants. Additionally, the CRW influences the management on an average of 3,991 head of livestock annually. Fifty-seven percent of surveyed participants have implemented reproduction management changes in their herds and 56% have observed improvements in herd reproduction due to the knowledge and skills gained at the CRW.

Search for Excellence in Sustainable Agriculture USDA SARE/NACAA Recognition Program

National Winners (1 from each Region)

HIGH TUNNEL WORKSHOP FOR HOME GARDENERS AND COMMERCIAL GROWERS

Weinmann, T.*¹

¹ Cass County Extension Horticulturalist, Fargo, ND, 58108

A high tunnel workshop was set up in Casselton, ND. The training was held in March and clientele interested in high tunnel produce production were targeted. Topics covered included:

- Basics of high tunnel production
- Pushing the profit pencil with high tunnels
- Current and upcoming crops for high tunnels
- Vegetable crops in high tunnels
- Hidden costs and environmental setup situations
- Irrigation and fertigation
- Pick your own raspberries
- Raised beds and children (by Todd Weinmann)
- Horticulture trials
- Climate change and regional implications
- NRCS EQIP Program

Impacts

The 101 clientele that attended from Minnesota, Wisconsin, and North Dakota; of these, 92 responded to an evaluation at the end of the event.

- 73% indicated a new insight and felt inspired into action
- 50% indicated that they would increase their business profitability by at least \$500 from attending this workshop.
- 100% indicated that they learned something new, that they did not know before, about high tunnels.
- 69% said that they would apply for the NRCS EQIP Program if they qualified.

A follow-up survey at six months was administered. Of 86 respondents, 63% incorporated something from the workshop into their business/operation that they would not have done if they had not attended and 94% indicated that they would recommend this workshop to others.

SARE covered the costs of some of the speakers.

THE RUTGERS COOPERATIVE EXTENSION - AGRITOURISM WORKING GROUP

Infante-Casella, M.*¹, Schilling, B.*², Bamka, W.*³, Rabin, J.*⁴, Komar, S.*⁵, Chase, L.*⁶, Brzozowski, R.*⁷, Wolinski, Laurie.*⁸, VanVranken, R.*⁹, Hlubik, W.*¹⁰

¹ COUNTY AGENT, ASSOCIATE PROFESSOR, RUTGERS NEW JERSEY AGRICULTURAL EXPERIMENT STATION COOPERATIVE EXTENSION, Clayton, NJ, 08312

² Extension Specialist in Agriculture Policy, Rutgers NJAES, New Brunswick, NJ, 08901

³ Agricultural Agent, Rutgers NJAES, Westampton, NJ, 08060

⁴ Director of Agricultural Research Centers, Rutgers NJAES, New Brunswick, NJ, 08901

⁵ Agricultural Agent, Rutgers NJAES, Newton, NJ, 07860

⁶ Associate Professor, University of Vermont, Brattleboro, VT, 05301

⁷ Agriculture Extension Educator, University of Maine, Orono, ME, 04469

⁸ Director, Northeast Center for Risk Management, University of Delaware, Newark, DE, 19716

⁹ Agricultural Agent, Rutgers NJAES, Mays Landing, NJ, 08330

¹⁰ Agricultural Agent, Rutgers NJAES, North Brunswick, NJ, 08902

The Rutgers Cooperative Extension, Agritourism Working Group <http://sustainable-farming.rutgers.edu/agritourism-in-new-jersey/> started 4 years ago, with the goal of conducting research, developing curriculum, and providing outreach for on-farm direct marketing clientele. The leadership team received 3 USDA grants (2 SARE grants and 1 Specialty Crop grant) totaling \$195,221 to develop educational materials, conduct farmer and service provider training, and to implement on-farm analysis for visitor safety and risk management. Materials developed with funding from a SARE grant, Award No. ENE11-121, can be found at <http://agritourism.rutgers.edu/training/>. The site received 3,454 visits in 2014, with unique visitors from 4 other countries. The materials were utilized by 3 other states (Maine, Vermont and Delaware) at educational events, as specified by the grant. The 4 states total educated 874 participants via webinars, in-class lectures and workshops with these materials. A website and blog was also developed with regularly updated information related to sustainable agriculture topics at <http://sustainable-farming.rutgers.edu/>. This site and blog is also supported by SARE State Professional Development Program funding and had 22,898 page visits in 2014. In 2013, the Rutgers team developed curriculum for a new undergraduate 3-credit course 11:015:315 Direct Farm Marketing and Agritourism that is now a required course for the

Agriculture and Food Systems major. Additionally, a statewide tourism website for agriculture, <http://VisitNJFarms.org>, was created and is maintained by the team. This promotional page had 41,505 page views from September 2014 to December 2014. Lastly, a comprehensive report <http://sustainable-farming.rutgers.edu/collaborative-projects-2015-sustainable-agriculture-rutgers-nesare/> was sent to 4,100 stakeholders, administrators and legislators to highlight sustainable agriculture programming.

PRECISION AGRICULTURE ONLINE EXTENSION COURSE

Hall, M.H.*¹

¹ EXTENSION SPECIALIST, ALABAMA COOPERATIVE EXTENSION SYSTEM, Belle Mina, AL, 35615

With crop production costs at record highs, producers must get the most out of every bag of seed, every jug of crop protection product and every tank of fuel. It is essential that farmers adopt Precision Agriculture technology to get the highest return out of the money spent to make a crop.

Educational Objectives

To teach farmers how to incorporate precision agriculture into their farming operations.

Program Activities

The course consists of these nine lessons.

Introduction

Yield Monitoring

Yield Mapping

Site Specific Management

Soil Fertility

Understanding the basics of GPS/GNSS

GPS/GNSS

Guidance Systems

Variable Rate Technology

Automatic Section Control Technology

Teaching Methods

A nine-lesson eXtension online course was developed. Each lesson has a handout, a video presentation, and a test.

Results

6,299 students have participated. They are from the U.S., Costa Rica, Colombia, South Africa, Australia, Rwanda, Russia, India, Canada, Cayman Islands, Portugal, Zimbabwe, Greece, United Kingdom, Argentina, Thailand, Malaysia and Brazil.

Impact Statement

After completing the course, students estimate fuel savings of

3.4 gallons per acre and a 13.57% reduction in fertilizer and crop protection chemicals.

Evaluation

Students must fill out the course evaluation before they receive their certificate for taking the course. Comments include:

- It was great that someone was able to take on this project. Thanks for making this course available to anyone willing to take the time and learn. It was great.

State Winners

THE FINGER LAKES MEAT PROJECT (FLMP)

Bartlett, K.*¹, LeRoux, M.*²

¹ Dairy & Livestock Educator, CCE-Steuben, Bath, NY, 14810

² Agricultural Marketing Specialist, Cornell University, Ithaca, NY, 14850

The Finger Lakes Meat Project (FLMP) is a program of Cornell Cooperative Extension of Tompkins and Steuben Counties and serves nine area counties. FLMP was developed from our research and the conclusion to work to grow sales of locally-raised meats in bulk quantities directly from farms to consumers. The FLMP consists of three main components to accomplish this. We operate a “Meat Locker” which is rentable freezer storage for consumers. We also have an educational website and farm directory at www.meatsuite.com as well as offering free consumer education classes. The Meat Locker opened in April, 2014 and was nearly full of local meat by year end. The project has been very successful and popular and has begun to meet its goals.

WV URBAN AG CONFERENCE

Porter, J.*¹

¹ Extension Agent, WVU Extension Service, Charleston, WV, 25304

As part of my WV SARE professional development program training, I planned and assembled a partnership to host the first annual WV Urban Ag Conference in 2014. The conference attracted 232 participants to learn about sustainable ag practices in fruit and vegetable production, backyard poultry, and beekeeping. The two-day conference also included homesteading workshops such as canning, fermenting, home wine making, and cheese making. This conference successfully brought together a partnership between my institution (West Virginia University Extension) and our 1890 institution (WV State University Extension) in an unprecedented cooperation and included the local conservation district, farmers market association, NRCS staff, and department of agriculture as other partners. The conference, under my leadership, raised over \$15,000 in contributions from local stakeholders to keep costs at a minimum for attendees. Meals featured local restaurants using locally sourced produce and meats.

The conference was meant to provide educational opportunities to small-scale producers and home producers to learn best practices in an urban or small-scale setting. All sessions of

the conference were evaluated, with a high level of evaluation participation that indicated a high level of knowledge gain and intended adoption practice. In an online post evaluation, all respondents indicated knowledge gain and 98 percent indicated practice adoption. This conference has not only had a large impact on agriculture in the state and beyond, but has also led to a working relationship between the two universities. Due to the popularity and support received, the conference will now be planned as an annual event.

IMPROVING COTTON’S ENVIRONMENTAL FOOTPRINT

Robertson, B.*¹

¹ Cotton Specialist, , Newport, AR, 72112

U.S. cotton producers are leading the way in responsible cotton production practices. Field to Market, a diverse alliance, is working to create opportunities across the supply chain. One tool created by Field to Market is the Fieldprint Calculator. Results are displayed as a footprint on a spider graph. Producers can see what aspects of their operation had an impact on a number of outcome-based metrics: land use; soil conservation; soil health (reflected by soil carbon status); irrigation water use efficiency; energy use; greenhouse gas emissions; and water quality.

The objective is to demonstrate how changes in cultural practices can impact a field’s footprint, evaluate how profitability is impacted, and to promote agricultures continuous improvement.

The use of this tool is being incorporated into existing Extension programs including the Discovery Farms and Cotton Research Verification Program.

Preliminary findings have been shared with County Extension Agents at in-service trainings in December of 2014. Presentations have been made at the 2015 Beltwide Cotton Conferences, 2015 Cotton and Rice Conservation Systems Conferences, and the 2015 Arkansas Crop Management Conference.

Preliminary results indicate a direct link to profitability and protecting the environment.

Most consumers want to help the farmer and do what’s best for the environment. The problem is that most consumers have difficulty separating fact from fiction from information rich sources available today. Improving sustainability of agriculture and the conservation of our resources while educating the public of our efforts will be a win-win for producers, brands and retailers, and consumers.

IMPROVING APIARY PRODUCTION IN ALACHUA COUNTY

Wilder, B.*¹, Gazula, A.*², Harris, S.*³, Van Cleef, G.*⁴, Willingham, R.*⁵

¹ Agriculture and Natural Resources Agent, UF/IFAS Extension, Gainesville, FL, 32609

² Commercial Horticulture Agent, UF/IFAS Extension Alachua County, Gainesville, FL, 32609

³ Master Beekeeper Volunteer, UF/IFAS Extension, Gainesville, FL, 32611

⁴ Apiary District 5 Supervisor, Florida Department of Agriculture and Consumer Services, Gainesville, FL, 32608

⁵ Apiary Inspector District 5, Florida Department of Agriculture and Consumer Services, Gainesville, FL, 32608

Beekeeping has become a popular hobby and small farm alternative enterprise in Alachua County. However, due to apiary diseases and pests, building a sustainable beekeeping operation successfully can be difficult for beginners. Therefore, to address this need for educational programs on beekeeping, the agents have partnered with stakeholders, Florida Department of Agriculture and Consumer Services Apiary Inspectors, and UF/IFAS Honey Bee Lab and formed the Beekeeping Working Group. The agents have coordinated and taught the *Becoming a Hobby Beekeeper Workshop* and the *Beekeeping Short Course*. From 2010 through 2015 the agents held six *Becoming a Hobby Beekeeper Workshops* and five *Beekeeping Short Courses*. The agents wanted the workshops to be hands-on and interactive rather than straight classroom presentations. The workshops consisted of traditional PowerPoint presentations followed by outside hands-on demonstrations. As a result of the *Becoming a Hobby Beekeeper Workshops* 92% (n=82) increased their knowledge of beekeeping practices and 24 of workshop attendees started keeping bees. After the *Beekeeping Short Courses* (n=33) 91% of the attendees started keeping bees and 88% improved their pest management skills. In addition, the agents also received an in-kind donation of beekeeping equipment from Dadant and Sons, Inc. valued at \$300. As a result of these workshops, the participants have increased their productivity by becoming more effective managers of their hives.

SUCCESSFUL SMALL FARMS OPPORTUNITIES CONFERENCES: DEVELOPING SUSTAINABILITY ON FARMS

Lichenwalner, Kelsey*¹, Mobley, M.*², Mobley, Martha L.*³, Rowland, Wayne*⁴, Tracy Perry*⁵

¹ Extension Agent, Agriculture, Warren County, NC Cooperative Extension, Warrenton, NC, 27549

² , , Louisburg, NC, 27549

³ Extension Agent, Agriculture, Franklin County, NC Cooperative Extension, Louisburg, NC, 27549

⁴ Ag Technician, NC A&T State University, Vance County Center, Henderson, NC,

⁵ Ag Technician, NC A&T State University, Franklin County Center, Louisburg, NC, 27549

SUCCESSFUL SMALL FARMS OPPORTUNITIES CONFERENCES: DEVELOPING SUSTAINABILITY ON FARMS has been a cumulative educational effort of the Cooperative Extension Agents as well as successful small farmers in the Franklin County, N.C. and region, since 2005. The annual conference which includes a trade show and introduction on the importance and impact of “Local Foods”, has steadily grown primarily in the past three years with over one-hundred (100) participants in 2015. Much media coverage

has been given this program, creating a positive awareness of sustainable agriculture for the small, beginning farmer.

As a result of this project, during the past three years alone, two-hundred fifty (250) small farmers from across North Carolina as well as Virginia are actively pursuing new practices and ideas to make their farms more sustainable and productive. Teamwork between the farmers, Cooperative Extension, and other agencies has been one of the greatest impacts, in addition to increased farm revenues, of the project. Annual financial support from the N.C. Farm Bureau strengthen and expand the program throughout the region.

JACKSON COUNTY FIELD CROPS

Hiller, M.R.*¹

¹ CEA-AG/NR JACKSON CO., , Edna, TX, 77957

Row Crop production accounts for over 100 million dollars annually in Jackson County. During the last 3 to 5 years, commodity prices have been strong while costs of major inputs such as fuel and fertilizer have increased. Producers are forced to pay close attention to all production decisions - from farm program alternatives to fertilizer and pesticide choices. Strong commodity prices and drought conditions during 2011 and 2012 have led to an increased interest in irrigation in an effort to increase and stabilize crop yields from year to year. Producers are required by law to be trained and licensed to use restricted-use pesticides. License holders are required to receive continuing education to renew existing licenses.

Working with businesses, stakeholders and cooperators, several demonstrations, programs and meetings were held to show trial results, help disseminate information and inform producers of best management practices.

Search for Excellence in Young, Beginning, or Small Farmers/Ranchers

National Winner

YOUNG BEEF PRODUCERS LEARN SUSTAINABILITY

Cheely, T.*¹

¹ County Extension Coordinator, University of Georgia, Warrenton, GA, 30828

The purpose of this program was to offer young beef producers their own unique beef programming thereby giving them the knowledge and hands-on experience to decide whether they will make beef cattle part of their future agricultural enterprise. This was accomplished by forming

a young beef producers group that included 18 producers between the ages of 11 and 18. I guided these producers through writing farm plans to obtain Farm Service Agency Youth Loans, obtaining starter herds, keeping records, making sound decisions based on economics and herd development. I had a monthly program included an educational program, a group discussion on progress and a question and answer session. This group was started three years ago. It began with twelve; three of these have since graduated from high school. Two, sold their herds and used the money for college. The other applied for and got a first time farmer loan from the Farm Service Agency, expanded his operation and is a full time farmer. Along with six new producers, all have all marketed their first calves, made their first yearly loan payment, retained heifers to build their herd and have enough money to operate through another cycle. Their brood cows are all rebred and future plans are in place. The remaining nine have marketed two sets of calves, made their loan payments and are well on their way to owning a profitable cow herd. These young producers are building their operations from the ground up.

National Finalists

GROWING A BEEF MARKETING COOPERATIVE

Hadcock, S.E.*¹, Buxton, S.A.*²

¹ EXTENSION EDUCATOR, , Hudson, NY, 12534

² Extension Resource Educator, Cornell Cooperative Extension, Hudson Falls, NY, 12839

Small scale livestock producers are challenged clients who need high volumes of product (beef). The inability to satisfy in part these high volume customers with high quality, consistent product has given rise over history to farmers banding together in an agricultural cooperative. Beef producers seeking a new marketing opportunity created a business designed to aggregate and streamline this system. Clients would see the new entity and have only one point of contact but the meat fulfilling the contract may be coming from several different farms.

In order for this marketing system to succeed, it requires education of all member farms for production, consistent quality in finished animals and the ability to adhere to protocols established to ensure consistent care and handling of the livestock. Adirondack Grazers Cooperative was the entity established to provide to aggregate and supply a small part the Greater New York City market with beef carcasses. Producers received a premium price 20% above standard non-retail outlets even after the 15% cooperative charge for handling the one point billing, scheduling and marketing. Educational programs were conducted to increase financial and production skills as well as inventory management. The cooperative grew by 350% to 36 farms impacting more than 6298 crop and pasture acres for 3863 animals. Each producer in the cooperative expanded their herd on average 15% with non-members adhering to the protocols to prepare to join the system.

CELEBRATING THE FLORIDA SMALL FARMS AND ALTERNATIVE ENTERPRISES CONFERENCE

Hochmuth, R.C.*¹, Henry, M.E.*², Treadwell, D. D.*³, Galindo, S.*⁴, Bolquez, A.*⁵, Barber, D.*⁶, Beckford, F.*⁷, Bosques-Mendez, J.*⁸, Devalerio, J.*², Fluke, A.*¹⁰, Gazula, A.*¹¹, Johnson, L.*¹², Kluson, R.*¹³, Lollar, M.*¹⁴, Nistler, D.*¹⁵, Skvarch, E.*¹⁶, Sullivan, J.*¹⁷, Thaxton, B.*¹⁸, Toro, E.*¹⁹, Tyson, R.*²⁰, Walter, J.*²¹

¹ Director, Suwannee Valley Agricultural Extension Center, Live Oak, FL, 32060

² Extension Agent II, UF/IFAS Extension Polk County, Bartow, FL, 33830

³ Associate Professor, University of Florida Department of Horticultural Sciences, Gainesville, FL, 32611

⁴ Assistant Professor, Department of Agricultural Education and Communication, University of Florida, Gainesville, FL, 32611

⁵ Research & Extension Center, Director and Extension Crop Specialist, Florida Agricultural and Mechanical University, Quincy, FL, 32352

⁶ Extension Agent, UF/IFAS Extension Columbia County, Lake City, FL, 32055

⁷ Extension Director, UF/IFAS Extension Lee County, Ft. Myers, FL, 33916

⁸ Extension Agent I, UF/IFAS Extension Marion County, Ocala, FL, 34470

⁹ Extension Agent II, UF/IFAS Extension Bradford County, Starke, FL, 32091

¹⁰ Extension Agent II, UF/IFAS Extension Osceola County, Kissimmee, FL, 34744

¹¹ Extension Agent II, UF/IFAS Extension Alachua County, Gainesville, FL, 32609

¹² Extension Agent II, UF/IFAS Extension Escambia County, Cantonment, FL, 32533

¹³ Extension Agent IV, UF/IFAS Extension Sarasota County, Sarasota, FL, 34241

¹⁴ Extension Agent I, UF/IFAS Extension Seminole County, Sanford, FL, 32773

¹⁵ Extension Agent II, UF/IFAS Extension Clay County, Green Cove Springs, FL, 32043

¹⁶ Extension Agent III, UF/IFAS Extension St Lucie County, Fort Pierce, FL, 34945

¹⁷ Extension Agent II, UF/IFAS Extension Osceola County, Kissimmee, FL, 34744

¹⁸ Extension Agent I, UF/IFAS Extension Santa Rosa County, Milton, FL, 32570

¹⁹ Extension Agent II, UF/IFAS Extension Suwannee County, Live Oak, FL, 32064

²⁰ Extension Director, UF/IFAS Extension Orange County, Orlando, FL, 32812

²¹ Extension Agent II, UF/IFAS Extension Brevard County, Cocoa, FL, 32926

Stakeholders expressed need for researched based information addressing emerging trends in smaller/alternative production and marketing and the Florida Small Farms and Alternative Enterprises Conference (SFAEC) was born. In collaboration with Florida Agricultural and Mechanical University (FAMU), the conference (2009-2014) delivered cutting edge information

to more than 2,600 unique individuals, establishing itself as the premier event for quality small farms information and outstanding networking. **ACTIVITIES/METHODS:** Concurrent sessions: presentations, panel discussions and hands on activities. Topics included organic/sustainable production, pest management, hydroponics, livestock production, business and marketing. **OBJECTIVES:** Improve ability to locate and apply research-based information and access resources; provide venue for advancing discussion on policies affecting small farms; and foster networking of small farmers. Consistently boasted locally sourced food and open atmosphere for networking with a large exhibit hall, vendors, and educational posters. Livestock exhibits featured and educational tours offered. **RESULTS/EVALUATIONS:** 2014: 87% (n= 74-181) felt they could apply what they learned; 88% could locate useful information; 60% could recognize how agricultural policies apply to operations and the associated roles, rights and responsibilities; 78% could increase their networking with small farms community members. Planned practice adoption related to sessions ranged from 40-78% (n= 27-80), with adoption of new hydroponic practices being most popular. 2014 respondents who had also attended the 2013 conference reported improved pest management, networking, and marketing abilities, among others, as a result. **IMPACT:** The Small Farms and Alternative Enterprises Conference has established a reputation for high quality program delivery and unmatched networking opportunities for small farmers.

FARMER-TO-FARMER NETWORKS FOR BEGINNING AND SMALL FARMERS

Fery, M.*¹, Powell, M.*², Matthewson, M.*³

¹ OSU/Regional Small Farms Extension Agent, Oregon State University, Corvallis, OR, 97333

² Regional Small Farms Extension Agent, Oregon State University, Central Point, OR, 97502

³ Small Farms Program, Oregon State University, Central Point, OR, 97502

One important outreach and educational tool that agricultural professionals, farmers and extension educators can use to facilitate small farms, young and beginning farmer success is the creation of farmer-to-farmer networks (sometimes known as communities of practice). Communities of practice approaches learning as social participation. Their function as an enhancement to learning is well known (Wenger, 1999; Wenger et. al 2002). While there are beginning farmer programs emerging in most western states, there is a lack of organized farmer-to-farmer social networking and training in this region. The project *Farmer-to-Farmer Networks for Beginning and Small Farmers* aimed to accomplish a number of objectives related to farmer networks. The first objective was to design a toolkit for developing farmer-to-farmer networks. The toolkit, now complete and available for download, contains information on the relevance and impacts of farmer networks, a facilitation manual, and corresponding outreach materials including sample fliers, a list of potential activities and class offerings, possible organizational structures, and an explanation of on-line social

networking opportunities. Second, we designed and conducted four half-day trainings in Washington, Idaho, Oregon and Montana for agricultural professionals on the nuts and bolts of starting a farmer network. In addition, we designed and conducted four half-day meetings with pilot women farmer networks in WA, OR, ID and MT. The meetings resulted in the successful formation of three women farmer networks and the training of forty agricultural professionals. Evaluation and impact data has been collected over the last year as a way to measure success of the project.

State Winners

U.P. BEGINNING FARMERS COURSE

Isleib, J.*¹, Frank Wardynski*², Walk, Michelle*³

¹ Upper Peninsula Crop Production Educator, MSU Extension, Munising, MI, 49862

² Upper Peninsula Livestock and Dairy Educator, MSU Extension, Ontonagon, MI, 49953

³ U.P. Community Food Systems Educator, MSU Extension, Sault Ste. Marie, MI, 49783

Upper Peninsula Crop Production Educator Jim Isleib provided leadership for development and delivery of an on-line series of winter webinars for beginning farmers from 2012 to the present. The program has grown from a 3-webinar, regional winter series in 2012 involving three local extension educators to a state-wide series of 20 winter webinars in 2015 involving 23 presenters. Participation has grown from 23 people representing 9 of Michigan's 83 counties participating in 60 webinar views in 2012, to 310 people representing 68 Michigan counties, 19 other states and one Canadian province participating in 440 webinar views in 2014. In 2015, approximately 225 people representing 47 Michigan counties, 14 other states outside and one Canadian province have participated in 770 webinar views during the first 9 of the 20 planned webinars. Webinars include a wide range of production and marketing topics and are designed to provide basic information to beginners. The planning committee solicits webinar topics and speaker participation throughout the agriculture and local food-related staff of MSU Extension and associated programs. The committee broadly represents Extension staff involvement in plant and animal-based agriculture and marketing. Annual program evaluation is conducted on-line several months after the last webinar. Results indicate that participation results in development of new agricultural businesses or enterprises by about 25% of respondents, creation of new jobs by about 5%, and increased farm income by about 20%. Average participant farm income is \$10,000 or less and increase in farm income ranges was around \$500 annually.

NEXTGEN FARMER SERIES

Richer, E.A.*¹

¹ Extension Educator, Ohio State University Extension, Wauseon, OH, 43567

With 52% of Ohio farmers at or near retirement age (2012

Census of Agriculture), there is cause for concern as to who will continue producing food, fiber and biofuels into the future. Despite having great youth agricultural education programs, sometimes the knowledge and experience gap is large between living on a family farm and operating one.

To begin addressing these gaps, a program on Monday nights in February entitled the NextGen Farmer Series was developed by Ohio State University Extension-Fulton County. Topics (2013-2015) have included computerized record keeping, farm financial analysis, budgeting, crop and livestock management, risk assessment, legal structures and succession planning. Each year's program is developed based in surveyed needs of the class participants. The program is team taught by the Fulton County Extension Educator and a collaborating state Extension specialist or local individual. In 2014, further collaboration with agribusiness partners allowed for a sponsored meal to be served prior to the evening's program. Average attendance at the program is 24 individuals.

A 2014 post-program impact survey indicated:

- 92% of participants wish to participate in the next year's program.
- 100% agreed (or strongly agreed) that the program improved their ability to calculate net worth, estimate farm profit, and calculate the cost of production.
- 92% agreed that the program improved their understanding of business structures used to limit liability and how to manage production risk.
- 100% agreed that they plan to have a formal family meeting in the coming year to start the succession conversation with the "current generation".

ANNIE'S PROJECT

Wantoch, K.L.*¹, Blazek, Jennifer*², Kirkpatrick, Joy*³, Sterry, Ryan*⁴

¹ Agriculture Agent Specializing in Economic Development, UW-Extension - Dunn County, Menomonie, WI, 54751

² Dairy and Livestock Agent, UW-Extension Dane County, Madison, WI, 53718

³ Senior Outreach Specialist, UW-Madison Center for Dairy Profitability, Madison, WI, 53718

⁴ Agriculture Agent, UW-Extension St. Croix County, Baldwin, WI, 54002

Women producing specialty and value-added products are a rapidly growing segment of the agriculture industry across the country. The background of women principal operators is significantly different from the general population with a higher percentage of beginning farmers and on average have less acres and agriculture sales. These smaller farms are more likely to rely on alternative markets including specialty crops and varieties, value-added products, and market diversification techniques.

To target this growing population, *Annie's Project* for Beginning and Value-Added Women Farmers was developed and held in Northwestern Wisconsin. Multiple program activities and teaching methods were utilized by the speakers who presented

information and resources on various topics to the women participants. When surveyed, the top three topics reported were: market research, business planning, and rules and regulations. These topics were also the highest rated, in terms of quality and usefulness, during the program.

100% of the participants reported that they will use the information presented in this program when starting, reviewing or expanding their business. 86% of participants have developed their business plan or moved forward with their enterprise plans since attending.

85% of participants felt that it is very important to offer programs especially designed for women in agriculture. Networking continued among participants even after completion of the series, highlighting the importance of building networking time into the program. Verbal feedback provided organizers with information about the need for more interactive sessions, activities, and/or case studies for future Extension programming efforts with farm women.

RUTGERS AGRITOURISM WORKING GROUP

Infante-Casella, Michelle*¹, Schilling, Brian*², Bamka, William*³, Komar, Stephen*⁴, Rabin, Jack*⁵, VanVranken, Richard*⁶, Chase, Lisa*⁷, Wolinski, Laurie*⁸, Brzozowski, Richard*⁹

¹ Agricultural Agent/Associate Professor, RUTGERS NEW JERSEY AGRICULTURAL EXPERIMENT STATION COOPERATIVE EXTENSION, Clayton, NJ, 08312

² Extension Specialist in Agricultural Policy, Rutgers New Jersey Agricultural Experiment Station, New Brunswick, NJ, 08901

³ Agricultural Agent/Associate Professor, Rutgers New Jersey Agricultural Experiment Station, Westampton, NJ, 08060

⁴ Agricultural Agent/Associate Professor, Rutgers New Jersey Agricultural Experiment Station, Newton, NJ, 08760

⁵ Director of Agricultural Research Centers, Rutgers New Jersey Agricultural Experiment Station, New Brunswick, NJ, 08901

⁶ Agricultural Agent/Professor, Rutgers New Jersey Agricultural Experiment Station, Mays Landing, NJ, 08330

⁷ Natural Resource Specialist/Associate Professor, University of Vermont, Brattleboro, VT, 05301

⁸ Extension Agent, Northeast Center for Risk Management Education, University of Delaware, Newark, DE, 19716

⁹ Agricultural Extension Educator, University of Maine Cooperative Extension, Orono, ME, 04469

The Rutgers Agritourism Working Group <http://sustainable-farming.rutgers.edu/agritourism-in-new-jersey/>, began 4 years ago with the goal of conducting research, developing curriculum, and providing outreach for on-farm direct marketing clientele. They received 3 grants totaling \$195,221 to develop educational materials, conduct farmer and service provider training, and to implement on-farm analysis for risk management. Many new and small farmers choose to direct market their products to attain the highest profit margin. This is especially true in the Northeast where land prices, inputs and

short seasons make it prohibitive for small farmers to compete in wholesale markets. Materials developed were delivered to 874 participants in four states; New Jersey, Vermont, Maine, and Delaware and can be found at <http://agritourism.rutgers.edu/training/>. The site received 3,454 page visits in 2014. Another outreach tool is the website and blog “Sustainable Farming on the Urban Fringe”, that gives regular updates and discussions on topics important to small farmers in the Northeast. It received 22,989 page visits in 2014. Additionally, the Rutgers team taught a new undergraduate 3-credit, required course titled, Direct Farm Marketing and Agritourism, for Agriculture and Food Systems Major. Six students from this class returned to small, family farms to share knowledge about direct marketing operations. In addition, the Rutgers team created and maintains a promotional page <http://VisitNJFarms.org> to help the public find farms to visit. This tourism page received 41,505 page views from September to December 2014. The work done by the Rutgers Agritourism Working Group has been invaluable to beginning and small farms in the state and region to enhance their ability to direct market.

FARM OPPORTUNITIES DAY CONFERENCE

Bailey, D.F.*1, Brabham, Brandy*2, Friend, Debbie*3, Loyd, Bruce*4, Shamblin, Michael*5, Straight, Alexandria*6

¹ Extension Agent, West Virginia University Extension Service, Glenville, WV, 26351

² Extension Agent, West Virginia University Extension Service, Spencer, WV, 25276

³ Extension Agent, West Virginia University Extension Service, Sutton, WV, 26601

⁴ Extension Agent, West Virginia University Extension Service, Weston, WV, 26452

⁵ Extension Agent, West Virginia University Extension Service, Clay, WV, 25043

⁶ Extension Agent, West Virginia University Extension Service, Harrisville, WV, 26362

West Virginia agriculture is mostly made up of small part-time farms, attempting to supplement their household income. The 2012 census documented that the majority of farms ranged in acreage from 1 to 179 acres, with the largest percentage being 50 to 179 acres. Just under 9,000 farms have a total sales of less than \$2,500 per year, documented in the last census.

In 2013, the WVU Extension Service and Glenville State College collaborated and developed Farm Opportunities Day Conference. The basis for the conference was to provide educational outreach that was economically feasible, and to reach out to more producers on a regional level. The first and second year the daylong conference offered 16 diverse educational topics covering agriculture production topics, enterprise diversification, marketing, leadership and organizations planning, as well as regional networking between agriculture producers and service providers.

In 2013 and 2014 the conference was held in January and had a total of 196 participants, and 18 partnering agencies and organizations participate. More importantly, participants responded that they gained information that they will use in their farming efforts. In 2015 the conference was held in

March and seven educational track were designed to cover more in-depth topics to provide producers with the education they need to leave the conference and pursue their agricultural goals.

The Farm Opportunities Day Conference inspired and laid the ground work for several additional regional daylong conferences across the state, called Farm Gatherings that were led by WV Farmers Market Association.

MOTIVATING AND EDUCATING AGRICULTURAL LEADERS

Coles, J.*1, Drake, G.*2, Phillips, J.*3

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² Butler County Extension Agent for Agriculture and Natural Resources, UK Cooperative Extension Service, Morgantown, KY, 42261

³ Simpson County Extension Agent for Agriculture and Natural Resources, UK Cooperative Extension Service, Franklin, KY, 42134

Agriculture depends on skilled and passionate leaders who can be effective advocates for issues facing agriculture, our local communities, Kentucky and our nation. For the last 5 years the Motivating and Educating Agricultural Leaders (MEAL) program has provided leadership development experiences and training for south central KY agricultural leaders.

Extension Agents in Butler, Simpson and Warren Counties facilitated and taught engaging classroom presentations, experiential learning opportunities, individualized coaching for participants to acquire skills to enhance leadership ability and contribute to the long-term success of their farms, businesses and communities.

Sixteen young agricultural leaders participated in the 2013-14 MEAL class. An end of course evaluation indicated 100% of participants had a better understanding of the legislative process and are more comfortable talking with their elected officials after the program.

A six month follow up survey illustrated that the MEAL participants were becoming an influential network of agricultural advocates. 100% indicated because of the knowledge and critical thinking skills learned in the MEAL program, they were more readily equipped to have discussions affecting agriculture and their communities.

BEEF CATTLE CLASS SERIES

Spearman, B.*1, Wood, R.B.*2, Chavis, T.B.*3, Futrell, V.J.*4, Garbacik, S.*5, Gonzalez, P.T.*6, Joseph, L.K.*7, Whitley, J.T.*8

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² Extension Livestock Agent, NC Cooperative Extension, Laurinburg, NC, 28352

³ Extension Livestock Agent, NC Cooperative Extension,

Lumberton, NC, 28360

⁴ Extension Livestock Agent, NC Cooperative Extension, Burgaw, NC, 28425

⁵ Extension Livestock Agent, NC Cooperative Extension, Goldsboro, NC, 27533

⁶ Extension Livestock Agent, NC Cooperative Extension, Clinton, NC, 28328

⁷ Extension Livestock Agent, NC Cooperative Extension, Fayetteville, NC, 28306

⁸ Extension Livestock Agent, NC Cooperative Extension, Kenansville, NC, 28349

North Carolina Cooperative Extension in five Southeastern counties recognized a need for more in-depth training for new beef cattle farmers to increase the profitability of their farms. Agents developed a three year plan to provide management classes to address these needs. Beef Cattle 101 series was held in 2013 and the Reproduction series was held in 2014. Both series consisted of three nights of classroom instruction followed by a hands-on field day to reinforce topics learned in class. Twenty-three producers attended Beef 101 series and 63 producers attended the Reproduction series. For Beef 101, 100% of participants said the class was informative. One participant said “this class is a must for anyone getting into cattle. The class had a variety of people with expertise in certain areas.”

The reproduction series results showed 100% of participants learned new ideas on calving and breeding seasons, heifer development and artificial insemination. 94% learned new ideas on the calving process, bull fertility, pregnancy checking and timed breeding. Seventeen producers who own 343 cows reported they would shorten their breeding season which will increase their profit by \$51,450. Nineteen producers who own 524 cows said they would pregnancy check cows which will increase profit by \$10,400. Comments included “these classes are essential for the growth and development of the cattle industry!” and “all of the instructors deserve a raise. If it wasn’t for you all teaching us, most of us couldn’t do this. Thanks so much; you did a GREAT JOB”.

OPPORTUNITIES FOR URBAN FARMERS

Miller*, L.M.¹

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Tarrant County is one of the fastest growing urban counties in the United States with an estimated population of 1.8 million citizens. Demand for locally produced fruits and vegetables is also growing. Consumers who value local farms are willing to pay more for high quality foods produced with low environmental impact (Local Food Systems: Concepts, Impacts, and Issues, USDA Economic Research Report 97, May 2010.) Local food and direct marketing opportunities are one of the fastest growing segments of agriculture. According to the latest Census of Agriculture, direct sales of food products from farmers to individual consumers rose by nearly 50 percent between 2002 and 2007. With supply exceeding demand, opportunities exist for new and small

farmer to operate profitably. With a combination of traditional site visits, face to face educational programs, field days and hosted webinars, small-scale agricultural operators became more knowledgeable in effectively identifying and evaluating horticultural diversification strategies for risk mitigation and improved economic sustainability based on total management goals and optimal resource base use. Emphasis was also placed upon education about effective direct marketing options, especially Farmers’ Markets and on farm direct marketing on sales. Participants ranged in age from 18 to 75, and included almost equal numbers of men and women.

EAST AFRICAN REFUGEE GOAT PROJECT OF UTAH

Chapman, C.K.*¹, Smith, J.O.*²

¹ Extension Livestock Specialist, UTAH STATE UNIVERSITY, Richfield, UT, 84701

² Davis County Director/Livestock & Agriculture 4-H Agent, UTAH STATE UNIVERSITY, Farmington, UT, 84701

The purpose of this educational program was to assist three communities of African refugees develop a goat production herd to provide food for their members, environmentally-friendly weed control on their landlord’s eco-sensitive lands, with an ultimate goal of providing educational funding for their children. I accomplished this using an advisory board to develop and teach a beginning husbandry short-course, hire a herd manager, assist in procuring breeding stock and equipment, help establish and monitor high-intensity grazing rotation for targeted weed species and assist in the first year kidding via a short-term sabbatical leave. I used several educational methods throughout the first year of production, including classroom instruction, consultation with the herdsman, field instruction of project volunteers concerning kidding protocols and range/weed management grazing techniques. Since 2012, the project team developed a business plan, purchased a small, genetically-diverse breeding herd, built housing and an equipment shed, upgraded existing corral facilities, obtained needed equipment, developed and implemented a rotational grazing plan, and managed the herd through a complete production year. In 2014, does delivered a 172% kid crop, but only weaned 112%. Participants gained much knowledge during the first year of production. The management system continues to undergo adjustments as the team determines how to best manage the herd to meet landowner and refugee goals.

Sustainable Agriculture Research Education (SARE) Seminar USDA SARE/NACAA Fellows Program

National Winners

Troy M Salzer

Extension Educator, Carlton County

1. North eastern Minnesota offers a unique set of challenges for agriculture with the short growing season, fragile soils, lack of farm infrastructure, and potential impact to surface and ground water. Yet on the other hand it offers vast opportunities with a very supportive customer clientele supporting local food, a strong network amongst farmers, the challenge to improve soils, reasonably priced land, adequate rainfall, and in most cases an open mindedness amongst farmers to consider trying new approaches to adapt. Over the past 17 years of being an agriculture agent I have had opportunities to work with numerous families through workshops, tours and one on one mentoring. I have found being able to offer real life “farmer” stories demonstrating the concept I am trying to teach has much more impact and allows the farmer(s) a better understanding and how the science might be implemented, balanced with stewardship, lifestyle, and profitability. Allowing the “student” to see through my eyes how the implementation of the process, understanding of the marketing approach, or a complete paradigm shift could be implemented and make a difference in their operations.

2. In the past and currently I have been fortunate to be directly involved with numerous SARE grants including ones such as working with Lake Superior Sustainable Farming Association to put together a continued advisement of a “Farm Beginning’s” program for NE MN and NW WI, “The Economic Comparisons of Raising Grass-fed Beef vs Grain Fed” with Jane Jewett, and more recently receiving as part of a farmer group for my own farm to evaluate, “How to Implement the Use of Cover Crops in a Short Season such as NE MN. All of these as well as so many others I have read about or experienced through NACAA tours are helping farmers understand how to take science and assist them in implementing ideas on farms or being the confirmation process of understanding how a different approach can work for them. They also have helped me become a better Ag Agent due to having those experiences I could share with farmers. I remember one tour in Oklahoma where our bus broke down at a diverse ranch. At first I admit I was disappointed due to schedule, but soon the rancher/doctor had us eating watermelon and telling us how he had all the pieces for direct marketing, which he needed to make the financial part of the operation tick. But, until he took the next step and hired a marketing manager, the operation just would not come together. He told us that part of it was the marketing, it was not his strength and it always fell to the bottom of his list. As soon as he hired someone else to do the

marketing he could move on and start a different enterprise. I believe that if it wasn’t for that situation, it may have taken many more years to understand how all the aspects of the farm need to come together. I have used this story many, many times in many different contexts.

These are just a few of the reasons I have such an interest in attempting to be part of the SARE Fellows program. My position as an agriculture agent allows me to see and experience things first hand, but I have much to learn about in respect to other climates, technologies, markets, lifestyles, genetics, and the interactions of all of these. This in conjunction with having a former Fellow suggest I should apply based on work that I had presented at former conferences as well as visiting with one of my state colleagues which has participated in the last class. The diversity of his experiences and the knowledge he gained has stirred a desire to gain further knowledge about these topic areas and can further improve my programing and allow me to better relate to the audience I am teaching.

3. Recently a few of my colleagues and I were discussing the aspects of what was currently missing within our grazing programing area and we concluded that there are no advanced grazing workshops offered in the entire state. Our University doesn’t offer a rangeland management degree or track; therefore we don’t have many resources in field. This is a huge opportunity/challenge. I see it as a way to integrate not only farmer/ranchers but also many other organizations both in the planning processes. We have discussed the importance of the typical players like Extension, NRCS, SWCD, GLCA, Midwest Forage Association, MN Cattleman’s Association, and MN Dept. of Agriculture but we also think Pheasants Forever, Ducks Unlimited, and Dept. of Natural Resources need to play a part. Currently in MN, more and more of the land ownership is being held within public organizations and are offering the potential for grazing. But, a workshop such as we are considering would allow all the players to come together and better understand how we can address things such as: grass management, environmental stewardship, water management, profitability, ecological impact, genetic selection, grazing strategies based on goals not just production. The intent of the program needs to address technical aspects of grazing for the farmers but also focus on creating awareness within agency folks that livestock can also help them do a better job managing for their wildlife goals and objectives. The other benefit of such a program is to allow for the interaction of the groups creating an understanding and awareness of all the goals and objectives from all parties and the hope to find a common ground.

4. Our intent is to survey the impact on knowledge level, understanding of the subject, etc. at the conclusion of the program, but also to complete a follow-up survey with the participants on the impact of the program and how they do their work.

5. As I think about the Fellow program, I think it could contribute to the grazing program in several manners including: basic science and resources, awareness and understanding of

how to create resiliency in any operation (i.e. financial, soil drought, flooding, plant grown, stress management), and how to facilitate the interaction of these groups to make the program successful.

In addition to this grazing program, I am sure I would use some of the ideas and concepts I would learn for articles written for our county newsletter which goes out to about 2400 households as well as for the MN Farm and Ranch Guide. Many of my ideas do come from such opportunities like this, allowing me to experience new ideas and it encourages me to research them and provide a recap and interpretation for the readers.

Some other programs I have directly worked on include Community Food System development, Food Hub, Farm to school, Bale grazing and out-wintering, Mob Grazing, MIG, corn grazing, cover crop for season extension, annual GLCA video conference, grass finished beef programing, and pasture renovation options. In addition, I have also hosted many workshops at our farm for MN Grazefest, NE forage and Grasslands summer tour, MPCA byproducts application trainings, wetlands delineation training and countless tours for water and fencing system demonstrations.

Crystal Stewart

Regional Agriculture Specialist

Cornell University

Capital District Vegetable and Small Fruit

1: This program has been recommended to me by three previous participants over the last two years. Jim Ochterski (NY) in particular told me it was the best continuing education opportunity that he has ever experienced, and strongly encouraged me to apply. Last year at the national meeting I attended the informational session of prior SARE Fellows and the informal gathering in the evening to learn more. I am most excited about the opportunity to work closely with educators and farmers from other disciplines. It's easy for regional specialists such as myself to lose sight of the bigger picture of sustainable agriculture; this program could help me re-integrate agriculture outside of vegetable production.

2: I am a regional vegetable specialist serving 17 counties in the Eastern NY Commercial Horticulture Program, and am entering my tenth year of Extension work. My emphasis on the team is service of small, beginning, and organic vegetable operations. Projects and activities I have recently been involved in which demonstrate a commitment to sustainability include research, education/outreach, and one-on-one, on-the-ground support. My recent research focused on integrated management of garlic fertility, weed control, and post-harvest handling to maximize both profitability and environmental stewardship (NE SARE funded). This project integrated conventional and organic strategies, offering a continuum of options for different farms. I am co-directing a research project to optimize fertility recommendations in high tunnels to improve soil health and long-term production prospects in New York. I most am most recently working with our primary

power authority and a group of innovative growers to design and built a series of energy-efficient germination chambers to determine how much we can delay starting greenhouses in the spring, reducing energy usage and increasing crop quality. I am also involved in recent efforts to better address climate and weather extremes for vegetable growers.

Last month I was appointed co-chair of the statewide organic program work team (PWT), and will spend the next two or more likely four years coordinating the activities of educators with organic program responsibilities and actively working to re-connect these educators to the many resources and organizations in the state and region, as this program work team has become inactive over the last two years and formal connections have eroded. This work will include dairy, livestock, forestry, and horticulture.

Finally, I am an independent consultant for Holistic Management, International. I have been teaching classes to beginning women farmers throughout the Northeast with HMI for 6 years. My work tends to focus on establishing financial plans which support quality of life and the environment, on land assessment and soils, and on leadership and communication. I was trained in Holistic Management by certified educators Phil Metzger and Erica Frenay in 2006-2007, in a two-year program for service providers in the Northeast.

3: As the co-chair of the state organic PWT one of my responsibilities is to bring together a diverse group of educators, farmers, and industry representatives to facilitate dialogue and development of shared vision. From this shared vision we seek opportunities to develop meaningful partnerships and projects which benefit our industries. We also seek to foster broader understanding of the ways that our agricultural sectors feed into and inform each other. I hope that working closely with other SARE fellows and farms will be an excellent primer to this work, helping to broaden my own prospects for sustainable agriculture and improving my comfort in working with other sectors of agriculture. Prior to twice-yearly PWT meetings, I will articulate what information I plan to incorporate from the fellowship activities. We will record the reaction to the information shared in minutes taken at the meeting and will ask what follow-up steps participants plan to implement based on the new information. The following year, we will check with PWT participants to see what progress has been made on these articulated steps.

I have been trained to use an integrated approach to farm evaluation and management, but am aware that my training only provides one possible angle to this work. I am very interested in the on-the-ground problem solving that this fellowship provides, and look forward to applying the new approaches that I learn to the farms that I work with. Two of my primary areas of on-the-ground support are helping beginning farmers to develop short and long-term plans for financial, environmental and social sustainability; and helping farms that are "in crisis" determine what next steps will best meet their needs. Learning new perspectives and strategies to inform this work would be very valuable. To evaluate this process I will first articulate

changes to my own process based on the training. I will then work with five growers while implementing my new process to determine the effectiveness of my new techniques. Both formative and summative assessments will be used to shape the process and measure immediate and longer-term impact. This work will be written up in newsletter and/or a journal article.

On a very practical level, I am always looking for new information to share with the industry I serve. I do not know exactly what my experience in the SARE fellows program would be, but I look forward to bringing new ideas and information home to the growers of my 17 counties through newsletter articles, workshops, and field days. Newsletter articles and field days will be shared with SARE, along with numbers reached.

4: I anticipate reaching 1000 growers with sustainable agriculture programming informed by this training over the course of two years. This will include the reach of our weekly (20 issues) and monthly (5 issues) newsletters, presentations at the NYS Fruit and Vegetable EXPO, the New England Vegetable Conference, NOFA NY winter meeting, and the Mid-Atlantic Vegetable Conference.

Based on this programming, I expect 250 to gain knowledge that they plan to implement on their farm to improve environmental, economic, and/or social sustainability. Of those who expect to implement changes, I expect 100 to actually make changes which result in improved profitability, environmental sustainability, community wellbeing, or social wellbeing. These changes will be measured through surveys already being utilized as part of regular programming.

5: Each year approximately 50-75 people will attend the organic PWT meetings and receive information obtained through the SARE fellowship. If follow-up workshops are desired as a result of information shared at the PWT, these will be provided. An additional 30 people will be reached through the annual Agriculture In-service at Cornell, organized by the various agricultural PWT's. At the Agriculture In-service, I will share about the fellowship program and any novel education or research techniques I think will improve my colleague's programming.

I expect that as a result of this experience I will be better prepared to integrate the different disciplines of agriculture at the PWT meetings, leading to partnerships which might not otherwise have been developed. Any partnerships which are fostered by the PWT meetings will be monitored and their work will be reported to SARE and to Cornell. I also expect to be able to share novel education and research topics and approaches which will improve my colleague's effectiveness.

JJ Jones

Area Agricultural Economics Specialist
Oklahoma Cooperative Extension Service
Southeast Area

1. Why you wish to attend.

As an extension educator I am always looking for opportunities to expand my knowledge base and help the producers that I serve. I feel that the opportunity to become a SARE fellow will increase my knowledge on sustainable agricultural practices and alternative farming systems. Being able not only to increase my resource library but also visit and see firsthand how these alternative practices work and succeed should provide me with the tools needed to help my clientele be successful.

2. Details of your experience and past activities that would demonstrate the understanding of and interest in sustainable agriculture and alternative ag practices.

Throughout my extension career I have been involved with several sustainable and alternative ag projects. Below is a list of some of these projects.

Oklahoma SARE – Each year I sit on the Oklahoma SARE advisory committee. This committee works on defining the areas of sustainable agriculture that Oklahoma SARE should work on each year. I have also helped plan and even present at their annual workshop and tour. I try and make their annual workshop and tour each year if my schedule permits.

Oklahoma Meat Goat Education – Starting in 2006 I started leading the educational efforts for meat goat education in Oklahoma. With the help of other county educators, area specialists and state specialists this educational team has developed several tools and programs to help producers not only in Oklahoma but from across the U.S. make their goat operations more sustainable. Example of these tools and programs include the Oklahoma Basic Meat Goat Manual, OSU Meat Goat Boot Camp and most recently a series of meat goat educational videos hosted on our own OSU Meat Goat YouTube channel.

Kerr Center for Sustainable Agriculture – I am fortunate to have the Kerr Center for Sustainable Agriculture in my area. I have worked with the Kerr Center on several projects. Some of these projects include the Beginning Farmer Workshops, Meat Goat Buck Test, and Sustainable Ag Tour.

SARE Producer and On Farm Research Grants – Over the last four years I have had the opportunity to put in for SARE Producer and On Farm Research Grants. To date I have received one producer grant.

Miscellaneous – Other alternative ag projects that I have been a part of include Hair Sheep Conference, multiple Women in Ag conferences, and an Organic Crop Production Conference.

3. A plan on how you intend to use the Fellows program

information in your local Extension programs and the evaluation methods you will implement.

As an area specialist serving 19 counties in Southeast Oklahoma I plan to work with my area's county educators to offer educational programs and workshops for producers interested in alternative ag practices. Topics for these sessions could include but are not limited to: organic and natural fruit and vegetable production, natural livestock production, alternative livestock production, backyard livestock production, selling at your local farmer's markets, and alternative cash crops for small scale producers. The sessions offered could be either county producer meetings or multi-county one day workshops.

Also, I have the ability and experience of creating educational videos and placing these videos on YouTube. Working with my county educators I will be able to create multiple videos on sustainable ag production. I can also work with Oklahoma SARE to create a YouTube channel to place these videos.

Each program or workshop will be evaluated in one or more of the following methods.

Producer Evaluations – Each producer that attends will be asked to evaluate the program for knowledge gained, worthiness of the programming and value to their operation.

Pre/Post Tests – Producers will be asked to take a pre and a post test to evaluate the change in knowledge gained from the program.

Follow-up e-mail or web based surveys – Producers will be asked to provide their e-mail addresses. Producers will then be contacted by e-mail sometime after the program to determine if the knowledge gained is still seen as useful by the producers.

4. The potential impacts and expected results that your participation could have on your local Extension sustainable agriculture program.

By increasing my knowledge base in sustainable agriculture production and my confidence, I expect the number of alternative ag producer meetings will increase across my area. By offering more of these types of programs producers that engage in these productions practices will be more willing to use the OSU extension office when they have questions or are seeking information.

5. The potential benefits to other professionals and clientele in their geographic area.

As an area specialist I am asked to provide in-service training for the county educators of Southeast Oklahoma. With an increased knowledge base in sustainable agriculture I will be able to help provide sustainable agriculture production education to these educators through these trainings. This increased training will allow them to expand their program base to include sustainable ag practices and thereby help the clientele in their counties.

Stacey Bealmear-Jones

Associate Extension Agent
THE UNIVERSITY OF ARIZONA
Yuma

1. I'm applying for the SARE fellowship because I'd like to strengthen my knowledge of sustainable agriculture and apply these principles in my region. I would also like to make contacts and partnerships that will help me communicate this information to my clients and improve my extension program. By participating in the fellows program, I will have an opportunity to meet and engage with similar minded colleagues around the country. This will allow me to build a team with whom I can work in the future, as I develop and carry out extension programs.

2. Yuma County is the largest producer of winter vegetables in the nation. These vegetables are transported on trucks to feed people across the country, but people in Yuma County have little access to these vegetables through direct markets. When I arrived in Yuma, there was a farmers market, but no locally grown foods were sold there. In fact, there was almost no produce sold at all. Most vendors sold crafts and trinkets, creating more of a craft fair than an actual farmers market. Many clients contacted me to complain about this and to see if I knew where they could purchase locally grown foods. Yuma residents were eager to join in the national trend of buying local, but most, if not all produce grown in Yuma County are large acreage, corporate entities, unable to serve a direct sales approach to local consumers. In 2011, I applied for and was awarded a Farmers Market Promotional grant from the USDA, to develop a new farmer training and start a locally grown farmers market in Yuma.

The Farmers Market 101 program taught small acreage landowners/first time farmers how to start a farm and market their produce from the ground up. The course contained a hands-on training that focused on growing and marketing produce. The six-month course started with ten weeks of classroom and field training. Topics included how to start a farmers market, business planning, marketing, obtaining a loan, record keeping, soil and fertilizer management, food safety, pest management, crop planning. During this time, students planned and marketed Yuma's first locally grown farmers market. They also planted, cared for and harvested the produce to be sold. When the produce was ready, the students sold it at the farmers market until the end of the growing season. Due to this program, The City of Yuma adopted the Farmers Market ordinances, which specified that farmers markets could run year round (up from 9 days) and have to sell 80% produce and only 20% crafts.

We saw improvements in sustainability during the farmers market for both customers and vendors. Before the market, 45% of clients indicated that they ate just two fruits/vegetables per day, if any. During the market 55% of clients indicated that they ate five fruits/vegetable per day. When survived, 100% of vendors said that Yuma's Locally Grown Produce Market increased their sales and profits. It did this by giving them a

low cost location, access to customers they would not have regularly had and free marketing. All of the vendors were also able to make sales outside of the market as well, which they were not able to do before. This occurred because they felt they had a better relationship with the Yuma community.

Since that time, in addition to working with small farmers, I have been collaborating with the Yuma County Health Department to start school and community gardens. In 2014, we worked with ten organizations/schools who were interested in starting gardens. Many of these gardens are located in areas that qualify as food deserts under the USDA designation. While these are not large-scale agricultural projects, they have some of the same issues large producers have, like food safety, marketing, and limited money to invest in infrastructure and equipment.

3. Yuma has one of the highest unemployment (26.1%) and poverty rates (19.2%) in the nation. This, combined with the many food deserts in our county, clients regularly lack adequate food resources, let alone fresh produce. The amount of locally grown foods available to underserved communities has not grown as fast as in upper income communities. The group I'm collaborating with at the Yuma County Health Department is dedicated to starting community gardens in food deserts. As I learn more about evaluating sustainable agriculture, I will be able to use those principles to assess the strengths, weaknesses, opportunities and threats to these gardens as they start and grow.

In the fall of 2015 I will be teaching an undergraduate course to U of A students on school and community gardening. The U of A students will attend a weekly lecture, given by myself and other extension faculty. This course will instruct U of A students on the fundamentals of gardening, curriculum design, and teaching techniques. Each U of A student will then be assigned a local school so they can help students and teachers with the design, construction, planting, harvesting, and healthy preparation of vegetables. I will teach the U of A students how to use the SARE evaluation methods so they can evaluate and improve their school's garden.

In addition to evaluation methods, I also hope to learn techniques other regions have used to grow their local food systems, allowing me to use those ideas into my program. Other issues of sustainability are also of interest to me. Water is becoming a larger barrier to sustainable agriculture in the desert Southwest and I want to find ideas that might help develop solutions.

4. Creating gardens in underserved communities has many potential impacts. These range from improving the household income, eating more vegetables, spending more time outside exercising and learning the connection between healthy eating and wellness. Community gardens also have the potential to strengthen neighborhoods because participants will meet and interact with people they may have lived next to for years, yet never met. These interactions and outdoor activity in a neighborhood can reduce crime and allow people to take pride in their neighborhood in a way they might not have before.

Impacts such as these might not be the typical sustainable goals one sees from the SARE program, but these are issues of sustainability that can benefit from SARE principles.

5. In addition to working with the Yuma County Health Department to start gardens, we are also working to complete Yuma's first Health Impact Assessment on community gardens. Our mission is to produce a set of recommendations to inform planners from The City of Yuma and Yuma County on the topic of community gardens. These will then be turned into policy by both governmental organizations, similar to the ordinance adopted for farmers markets. These policies will be used to guide those starting gardens in Yuma, safely and effectively. The evaluations principles I learn in the SARE program can be helpful in this process.

As a member of the Arizona Sustainable Agriculture working group, I would be happy to share the information I learn with other agents and help them extend it to clients in their counties. The skills and information I build during this fellowship will allow me to cooperate with colleagues and clientele on a state and regional basis. This will strengthen sustainable agriculture statewide.

2015 Service to American/World Agriculture

Dr. E. Gordon Gee

President, West Virginia University

Emeritus President, The Ohio State University

Dr. Gee is a world renowned leader of higher education who has made long-lasting impacts on agricultural research and Extension in the United States and several other countries.

Dr. Gee is among the most highly experienced and respected leaders in higher education, having been named in 2009 by Time magazine as one of the top ten university presidents in the United States. He chairs the American Council on Education's Commission on Higher Education Attainment, and is a Fellow in the prestigious American Association for the Advancement of Science, the world's largest and most prestigious science organization. He has been named the Outstanding Academic Leader on behalf of Historically Black Colleges and Universities.

Dr. Gee has served as President or Chancellor for more than 33 years at five different universities in various parts of the United States, and has a major presence on countless state and national higher education policy commissions and the Association of Public and Land Grant Universities (APLU).

Dr. Gee's leadership of two of the largest land-grant universities in the United States-- West Virginia University and The Ohio State University, have resulted in higher profiles, expanded resources, and greater effectiveness of agricultural research and Extension programs in those states and the nation.

Gee serves on numerous boards and commissions including the Board

of Trustees of the National 4-H Council, serving on the Executive Committee. His commitment to 4-H and agriculture is evidenced through frequent visits to county Extension offices, farms, and agricultural research facilities throughout the state. While serving as President of The Ohio State University, Gee visited farms, county fairs, agribusinesses, and county Extension Offices in each of the state's 88 counties, typically riding in a pickup truck driven by the county agent in the county he is visiting.

Gee has been a champion of expanding the role of agricultural research to solve the world's most pressing problems related to hunger, sustainability, nutrition, and energy, both in the US and globally. Gee promoted agricultural research, teaching, and Extension programs conducted by Ohio State's College of Food, Agricultural, and Environmental Sciences in Africa and Asia while serving as President of The Ohio State University.

Gee routinely challenges faculty throughout the university to "be more like Extension" when addressing societal needs and problems. While at Ohio State, Gee oversaw a new program which is using nearly \$250 million dollars in new funding to hire 500 new faculty members in three broad Discovery Themes which will address complex technological, social, and environmental problems facing the world today. One of these Discovery Themes is Food Production and Security, which is directly linked to the college of agriculture. The



other two Discovery Themes; Energy and the Environment and Health and Wellness also will involve college of agriculture faculty and programs.

Dr. Gee has received numerous honorary degrees, awards, fellowships, and recognitions. He is the author of 11 books, and served as Judicial Fellow and Staff Assistant to US Supreme Court Chief Justice Warren Burger.

There is no greater champion and leader for agricultural research and Extension in the world than E. Gordon Gee.

2015 Achievement Award Winners

North Central Region

Illinois - Angie Peltier
Indiana - Anna Morrow
Indiana - Michael J. O'Donnell
Iowa - Jennifer Bentley
Kansas - Michelle Buchanan
Kansas - Jamie Hancock
Michigan - Adam J. Kantrovich
Minnesota - Jill L. Sackett
Missouri - Joni Harper
Nebraska - Elizabeth Killinger
North Dakota - Joel Lemer
Ohio - Mike Gastier
Ohio - Nanette L. Neal
South Dakota - Adele Harty
Wisconsin - Mark Hagedorn

Northeast Region

Maryland - Jessica L. Flores
New Hampshire - Kelly Mcadam
New Jersey - Pat Rector
New York - Matthew LeRoux
Pennsylvania - Nicole Carutis
West Virginia - Alexandria Straight

Southern Region

Alabama - Bethany A. O'Rear
Arkansas - Jesse Bocksnick
Arkansas - Amy Heck
Arkansas - Kami Marsh, MS.
Florida - Jim DeValerio
Florida - Gary K England
Florida - Norma Samuel, Ph.D.
Georgia - Brenda L. Jackson
Georgia - Tim Smith
Kentucky - Ty Back
Kentucky - Mary Mccarty
Kentucky - Brandon Sears
Louisiana - Mariah Bock Simoneaux
Louisiana - Raghuvinder Singh
Mississippi - Ty Jones
Mississippi - Tracy Robertson
North Carolina - Mark Blevins
North Carolina - Andrew Burlingham
North Carolina - Will Strader
North Carolina - Amanda Taylor
Oklahoma - Keegan Varner
South Carolina - Millie Davenport
Tennessee - Adam M Hopkins
Tennessee - Steven Michael Huff
Tennessee - Justin Stefanski
Texas - Tyler Fitzgerald

Texas - Fred M Hall
Texas - Shane Jennings
Texas - Janet Laminack
Texas - Aaron Low
Virginia - Kevin Camm

West Region

Alaska - Steve Seefeldt
Arizona - Kurt D. Nolte
Colorado - Karen Crumbaker
Idaho - Lauren Ashley Hunter
Montana - Rachel Endecott
New Mexico - Jeffrey L. Anderson
Oregon - Luisa Santamaria
Utah - Allan Sulser
Washington - Donald A. Llewellyn
Wyoming - Mae Smith

2015 Distinguished Service Award Winners

North Central Region

Illinois - Jennifer Fishburn
Indiana - Jeff Burbrink
Indiana - Bill Rice
Iowa - Jerry W. Chizek
Kansas - Cheri D Nelsen
Michigan - Steven Scott Poindexter
Minnesota - Lizabeth Stahl
Missouri - Wayne Flanary
Nebraska - John C. Fech
North Dakota - Steve Sagaser
Ohio - Brad Bergefurd
Ohio - Chris L. Bruynis, PhD
South Dakota - Robin Salverson
Wisconsin - Greg Blonde

Northeast Region

Maryland - Herbert E. Reed
New Jersey - Jenny Carleo
New York - Susan Elizabeth Pezzolla
Pennsylvania - Amber Yutzky
West Virginia - Debra Friend

Southern Region

Alabama - Lisa A. Kriese-Anderson
Alabama - Michael D. Reeves
Arkansas - Daniel J. Griffin
Arkansas - Cindy Ham
Arkansas - Rick Wimberley
Florida - Leslie Baucum
Florida - Lawrence Figart
Florida - Elena M Toro
Georgia - M Brent Allen
Georgia - Jeff Cook
Georgia - Jake Price
Kentucky - Douglas W. Shepherd
Kentucky - Robert A. Smith
Louisiana - Ronald Levy
Mississippi - Donna Beliech
Mississippi - James W. "Jimbo" Burkhalter
North Carolina - Darrell Blackwelder
North Carolina - Eileen A. Coite
North Carolina - Richard Craig Ellison
Oklahoma - Max Gallaway
South Carolina - Paul S Thompson
Tennessee - Jeffrey Lannom
Tennessee - Mitchell Mote
Tennessee - Rebekah Norman
Texas - Matt Bochat

Texas - Ralph S Davis
Texas - Leonard Haynes
Texas - Dale Wayne Rankin
Virginia - Watson Lawrence
Virginia - Scott Reiter

West Region

Arizona - Randall Norton
Colorado - Kurt Jones
Montana - Ken Nelson
New Mexico - Tracy Drummond
Oregon - Steve Renquist
Utah - Boyd Kitchen
Washington - Michael R. Bush
Wyoming - Bridger Feuz

NACAA Hall of Fame Award

The NACAA Recognition and Awards Committee is proud to present these four recipients with the NACAA Hall of Fame Award. The Hall of Fame Award recognizes one member or life member from each NACAA region. Each state can nominate one individual. Based on a 500 word summary and three letters of support, the state nominees are evaluated on their Extension programming, state and national association activities and humanitarian efforts beyond the normal call of duty.

Our thanks to John Deere for sponsorship of the NACAA Hall of Fame Awards



JOHN DEERE

**2015
North Central Region
Hall of Fame Award
Neil Broadwater
Minnesota
37 Years**



Neil Broadwater has made significant contributions as an educator, community member, and member of the state and national associations; he is truly distinguished and deserving of the NACAA's Hall of Fame Award.

The majority of Neil's career was spent serving southeast MN, a region known for dairy production and environmental sensitivity. Neil's work to support federal and state grants balanced the needs of farmers to successfully produce while protecting the beauty and natural resources of this region. He was recognized with awards from Extension, the local SWCD, and the American Dairy Association for his efforts. The fact that southeast MN remains one of the most productive dairy regions in MN is in part thanks to Neil.

Neil spent his career as a prolific writer, he authored/edited thousands of useful and timely articles for farmers in Winona County, and later, throughout the state as a Regional Educator, and editor/website manager for the UMN Extension Dairy Team.

In 2007, major flooding led to a disaster declaration from

the President for southeast Minnesota. Neil coordinated Extension's regional staff response and developed resources for flood victims. Neil developed an "Action List" for flood victims that listed local contacts, resources, and assistance programs which helped families recover. He shared this information with the MN House of Representatives Agriculture Committee at a listening session in the region.

Neil's professional contributions are matched by his humanitarian and civic efforts. As a 36 year member of the Winona Kiwanis Club, which sponsors the southeast MN Special Olympics, Neil has led multiple committees and projects, and currently serves as President. Also, Neil recently chaired a long range planning committee for his church, developing a plan (the church's first) with goals and timelines which will guide decision-making for years to come. Neil is also a veteran; he served in Vietnam with the U.S. Army in the 101st Airborne Division.

In Extension, the line between civic and professional contributions can get blurry, which is likely a good sign; it shows one's commitment to the community as well as the concept and values of Extension. Neil has embodied this through volunteering his time to develop the Winona Farmers' Market, and Winona County's annual Family Night on the Farm. In a way, Neil was an Extension Educator around the clock.

Neil served with distinction in various leadership positions in the Minnesota and National Association. Neil is the NC Region's Vice Chair for the Life Member Committee and will become the National Chair in 2016. Neil has attended twenty-four AM/PICs, eighteen of which accompanied by his wife. Among the many achievements in the MN and National Association, Neil was instrumental in winning the 1995 AM/PIC bid for MN, and set up an endowment fund which provides scholarships to UMN students. Currently, Neil's continued engagement, institutional knowledge, and leadership greatly strengthens the MN Association.

Neil's commitment and enthusiasm to serving people and his profession, the outstanding results of his work and volunteerism make him a most deserving candidate for this award.

Year DSA Awarded: 1991

**2015
Northeast Region
Hall of Fame Award
Thomas J. Gallagher
New York
38 Years**



Tom Gallagher began his career in July of 1976 as a Cooperative Extension Agent for Cornell University providing educational programming in dairy, livestock, farm management, and field crops. In 1984 Tom became part of a three county regional team which expanded to a five county team in 2012. His work responsibilities continued to increase as part of the expansion to include additional programming in marketing, land use planning, small farm start-ups and farmers market development.

Tom's on farm research, educational programs, special projects, and work with the regional and national agricultural agents association has produced tremendous results for agricultural producers, consumers, and elected officials. His work with grass-fed beef has resurrected that market increasing the number of producers over 400% as well as boosting the whole organic and local food movement. Tom's efforts in developing farmers markets have brought fresh produce to thousands of city workers as well as areas considered food deserts. His work with the school systems have resulted in school districts requiring up to 50% of the food they serve to be locally grown and served fresh. Each summer Tom hosts hundreds of inner city youth on the city's farm in an effort to teach these young people the connection between the food they eat and the farms that produce it. These types of efforts will assure the sustainability of agriculture well into the future.

Tom was instrumental in the reopening of a local USDA livestock processing plant to reverse the decline in livestock production in the area. He also was instrumental in the development of a marketing method for sheep and goats through a tele-auction system that has since marketed over 4000 head per year. In addition to his educational roles Tom has also served as the Agricultural Program leader in Albany County from 1990 through 2012 and in Schenectady from 1992 through 2003. He has been a strong voice for new staff involvement in the National Association of County Agriculture Agents as well. Mentoring local staff and leading by example. In 2007 he served as the State Committee Chair for Early Career Development. He has served as the New York State President in 1996, in 1988 as the Regional Director, 1998 -2000 Northeast Regional Vice-Director, 2001-2003 as the Northeast Regional Director.

Tom has attended 26 AM/PIC's beginning in 1976 with the meeting in Hartford Conn. When the AM/PIC came to Ithaca

he was involved in its planning and implementation and served on the executive planning committee as the fundraising Co-Chair in 2005 in Buffalo. Tom Understand the value of being part of the state and national association and encourages others to get involved as well.

Year DSA Awarded: 1989

**2015
Southern Region
Hall of Fame Award
Eddie Holland
Texas
31 Years - Retired**



Eddie Holland began his Extension career in 1972 as the Assistant County Agent in Terry County. His first three positions were in small farming communities in Terry, Briscoe, and Medina Counties. He focused on result demonstrations that could improve crop yields and income. In Briscoe County cotton acreage increased from 20,000 to 100,000 acres and yield increased from one to one and a half bales per acre during his tenure. Each year he published a result demonstration handbook and presented it to farmers and ranchers in his county at an event to show his appreciation for their support and cooperation. During this period, he won two state awards for his handbooks, one for a Single Agent County, and one for a Two Agent County.

In Medina County, Eddie began working with pecan growers, something he continued to do for the rest of his Extension career. He served as State Pecan Show Superintendent for 25 years, and was the first County Extension Agent for receive an honorary lifetime membership to the Texas Pecan Growers Association in 1994.

When Eddie arrived in Kerr County in 1982, the total sales at the Junior Livestock Auction sales equaled \$20,000. He led efforts to reorganize the auction sale structure, fund raising, and community awareness. The sale grew to \$735,000. 4-H members were awarded \$360,000 in scholarships during his 21 years in Kerr County.

In 1988, Eddie began working with the Kerr County Shooting Sports Club to develop a 4-H Shooting Sports Complex. Under his leadership, over 15,000 volunteer hours were devoted to the grant writing, donation solicitation and volunteer recruitment needed to complete this project. The complex is valued at \$1.5 million and has been dedicated at an official Olympic training facility.

Kerr County is known for its goats, earning the unofficial title

of Mohair Capital of the World in the 1930s. In the 1990s meat goats became more important due to the introduction of the well adapted and productive Boer Goat. Eddie organized a Goat Gathering seminar in 1995 that eventually attracted 1700 attendees from 15 states and 2 foreign countries. Many states have used the same format for Extension goat production programs.

Eddie attended his first NACAA AM/PIC in 1984 and has now participated in 31 consecutive conferences, regularly helping out with the Scholarship Auction. In 1998, he served as meeting site chair when the AM/PIC was held in San Antonio. 2,157 members and guests attended. In 1999, he was elected NACAA Vice President and went on to serve as President Elect in 2000 and President in 2001.

He has served as State, Regional, Vice and National Chair for the Professional Training Committee. He was the Treasurer of the NACAA Educational Foundation for many years and has donated \$16,238 to the Scholarship fund.

The Texas County Agricultural Agents Association has also benefited from his continued involvement. He has served on the TCAAA Board as an Alternate Director, District Director, Vice President, and President and currently serves as the Alternate Director for Life Members.

Year DSA Awarded: 1987

**2015
Western Region
Hall of Fame Award
Rob. L. Grumbles
Arizona
38 Years - Retired**



Robin “Rob” Grumbles served Arizona as an exemplary Extension Agent for over 38 years. He built programs that earned the trust of his clientele. He brought people together to solve problems that strengthened communities and improved the local economy. Rob was a catalyst for good like few others.

He began his career working among the Hopi people. As a result, he has always been sensitive to the feelings and needs of the many cultures that make up Arizona. He was a strong and tireless advocate for all protected classes.

Later, he transferred to Kingman as Agriculture and Natural Resources agent. He was instrumental in helping producers, Master Gardeners, home and professional landscaping stakeholders, colleagues, and agency personnel apply research-based information. He was particularly known for developing regional programmatic partnerships in Utah, Nevada,

California, and Arizona. Some of the innovative programs that he created included: The Arizona Strip Range Livestock Workshop series; a Rangeland Monitoring Partnership with the Bureau of Land Management that employed skilled graduates in range management to collect range condition and effectiveness data; and annual Master Gardener training in Kingman, Bullhead City, and Lake Havasu City. He was a strong advocate for all stakeholders. These and other programs significantly improved the ability of decision makers and managers to properly operate their farms, ranches, and urban environments in a sustainable manner.

Rob knew exactly how to motivate team members to work together in a synergistic manner. He was generous with his time and knowledge impacting thousands of people. He was known for his ability to make complex information usable and practical as he delivered science-based information in a down-to-earth and easily understandable manner.

In addition to his work with stakeholders and clientele, he was a strong leader and role model among his colleagues. He was a trusted mentor to many coworkers in and out of Arizona. Serving in various leadership positions within the Arizona Agricultural Extension Association, he was a source of inspiration and guidance to his colleagues.

As long time state scholarship chair, he encouraged and assisted almost 100% of his colleagues to invest in the NACAA Scholarship Fund. Once qualified for scholarships, agents used them to participate in multiple events, such as tours to California and Northern Mexico which Rob personally helped organize. These and other activities helped build unity, professional capacity, collegiality, and solidarity among colleagues. Rob kept us on track.

Rob’s vision and leadership also extended to fiscal matters. It was his idea to sell items by auction, at first to colleagues and later to visitors, to benefit the AAEE budget. Not only did these auctions bring in thousands of dollars, they were also fun. He and his team created a tradition that is not only immensely popular, but helps AAEE accomplish its mission.

In my entire career, I cannot think of anyone else who has had more influence for good than Rob. It is my pleasure to nominate a great colleague, and a deserving mentor, for the Hall of Fame Award.

Year DSA Awarded: 1988

2015 ABSTRACTS OF THE NATIONAL WINNERS AND FINALISTS COMMUNICATIONS AWARDS CONTEST

Audio Recording National Winner

Bachman, G.*¹, Taylor, Amy*²

¹ Horticulture Specialist, Mississippi State, Biloxi, MS, 39532

² Extension Associate II, Agricultural Communications,
Mississippi State, MS, 39762

Southern Gardening Radio is a daily (260 segments per year) 2 minute radio segment designed to air within Mississippi radio programming. Southern Gardening Radio is heard on more than two dozen radio stations across Mississippi as well as Mississippi Public Broadcasting.

Segments are designed for persons interested in lawn and garden care and seasonal interest.

The goal of Southern Gardening Radio is to educate and inspire the home gardener in Mississippi.

The following segments are being submitted as examples of the body of work for Southern Gardening Radio.

Southern Gardening Radio, Virginia Sweetspire,

[http://msucare.com/news/radio/southerngardening/
audio/15/sg021715.mp3](http://msucare.com/news/radio/southerngardening/audio/15/sg021715.mp3)

Southern Gardening Radio, Winter Lichen,

[http://msucare.com/news/radio/southerngardening/
audio/15/sg020215.mp3](http://msucare.com/news/radio/southerngardening/audio/15/sg020215.mp3)

NATIONAL FINALISTS

Lentz, E.M.*¹

¹ Educator, The Ohio State University Extension, Findlay,
OH, 45840

This Extension Educator participated in the Ag Talk program every week day on radio station WFIN. Program objective is to keep the rural community informed about the latest agricultural information including crop alerts and upcoming Extension educational activities. Discussion is led by the station's Farm Services Director. Topic and content are provided by the Extension Educator. The program is recorded in advance at the radio station. The recordings are played daily on the main station and aired additionally on two sister stations, WKXA and The Fox. Program is received by about 70,000 listeners.

In addition, each Thursday morning, the Extension Educator calls into the station for a live program of Rural News and Issues on recent developments that have occurred between recordings. Sound bites and some programs are aired at other times including weekends. Program submitted was aired 6:35 a.m. on WFIN, August 26, 2014, which discussed the potential for white mold in soybean. Recorded programs are stored on county web site for six weeks. For program outcomes, producers have been informed about the latest agricultural issues, provided summaries and Internet locations of latest university research information, and given dates and times of upcoming Extension educational programs. Results of the programs have included producers using the information in their farm operations and attending Extension programs. Programs have also resulted in increased requests for more information via email, telephone, county web visits, or visits to the County Extension Office.

Drake, Jr., G.K.*¹

¹ County Extension Agent for Agriculture and Natural Resources, University of Kentucky, Morgantown, KY, 42261

The Butler County Agriculture Connection radio program is a 15 minute agriculture awareness and information program that airs each week on Butler County, Kentucky's local radio station 101.5 WL BQ. The weekly show airs every Thursday morning at 8:45 a.m. The Butler County Agriculture Agent makes meeting announcements and other agriculture news during the first segment and after a commercial break from the sponsors there is an interview segment with different people involved from the agriculture industry. The radio station also reads farm market prices twice per day as a service to the agriculture industry. This program aired March 5, 2015 at 8:45 a.m. This program was recorded in the studio at WL BQ in Morgantown. Chad Tyree our Stockman's Association was my interview guest for this program.

Beddes, T.*¹, Caron, M.*²

¹ Extension Associate Professor, Horticulture, Utah State University, Provo, UT, 84606

² Extension Assistant Professor, Horticulture, Utah State University, Lehi, UT, 84043

The underlying purpose of this radio program was to expand the reach of Utah State University Extension and fulfil the mission of sharing research-based information to a wide audience. Specifically, gardening questions are answered by one or more Extension horticulturists. The program is multi-faceted and features weekly horticulture topics, fielding listener questions through social media, and taking live calls on and off the air. Live calls and social media questions can be on any subject, requiring the co-hosts to be able to respond to a wide range of questions related to gardening in a broad sense. The program is aired on KSL (102.7 FM and 1160 AM in the Salt Lake City region). KSL estimates over 50,000 local and regional program listeners, and according to Nielsen ratings (<https://tlr.arbitron.com/tlr/public/ratingsDisplay.do?method=loadRatingsForMarket>) is the most listened-to

News/Talk/Information station in its market. According to the station, the KSL Greenhouse show is the most listened-to Saturday radio show in Utah. We co-hosted this particular show to provide expertise in information regarding the use of hobby greenhouses and season extending structures. The included segment is from the February 7, 2015, and has been edited to remove commercial and news breaks. It highlights planned content and questions from callers as representative examples of the weekly show. For the program in its entirety please visit <http://www.ksl.com/podcast/greenhouse.xml?title=the-ksl-greenhouse>

Bound Book

National Winner

Barnhill, J.*¹, Heflebower, R.*², Hunter, B.*³, Olsen, S.H.*⁴, Pace, M.*⁵, Wagner, K.*⁶

¹ Agriculture Agent, Utah State University, Ogden, UT, 84401

² Horticulture Agent, Utah State University, St. George, UT, 84770

³ Horticulture Agent, Utah State University, Farmington, UT, 84025

⁴ Agriculture Agent, Utah State University, Farmington, UT, 84025

⁵ Agriculture Agent, Utah State University, Brigham City, UT, 84302

⁶ Horticultural Agent, Utah State University, Salt Lake City, UT, 84190

Surveys at home and garden shows and calls to the Extension office indicated an increasing interest in organic gardening. There were limited factsheets available on organic gardening and so a comprehensive book on organic gardening was developed. The primary audience was home gardeners and small-scale farmers. The book was introduced at an organic gardening workshop in Salt Lake County. Ten preview copies were sent to each Extension office in Utah to be distributed to community garden managers, natural resource management professionals, and community leaders. Copies were also sent to independent garden centers in Utah. Those receiving preview copies were asked to fill out a survey. Of surveys returned, 100% said they were likely or very likely to recommend the book and 90% rated the book as useful or very useful. Wagner and Olsen served as the senior writers for the book and the other NACAA members helped write sections of the book. University specialists as listed on the title page contributed to different sections of the book. The book was printed by USU Publication and Design and a total of 1,000 copies were printed. Books were adopted and sold by three Extension offices, two garden centers, and were sold at the Wasatch Community Gardens spring plant sale. Over 556 copies have been distributed to date.

NATIONAL FINALISTS

Majumdar, A.Z.*¹, Lloyd Chapman*², William East*³, Gary Gray*⁴, Neil Kelly*⁵, James Miles*⁶, Bethany O'Rear*⁷, Michael Reeves*⁸, Ann Chambliss*⁹, Kassie Conner*¹⁰, Tony Glover*¹¹, Joe Kemble*¹², Edward Sikora*¹³

¹ EXTENSION SPECIALIST, ALABAMA

COOPERATIVE EXTENSION SYSTEM, Auburn University, AL, 36849

² Regional Extension Agent, Alabama Extension, Belle Mina, AL, 35615

³ Regional Extension Agent, Alabama Extension, Ashland, AL, 36251

⁴ Regional Extension Agent, Alabama Extension, Birmingham, AL, 35223

⁵ Regional Extension Agent, Alabama Extension, Headland, AL, 36345

⁶ Regional Extension Agent, Alabama Extension, Mobile, AL, 36608

⁷ Regional Extension Agent, Alabama Extension, Birmingham, AL, 35223

⁸ Regional Extension Agents, Alabama Extension, Hartselle, AL, 35640

⁹ Extension Associate, Alabama Extension, Auburn, AL, 36849

¹⁰ Plant Pathologist, Alabama Extension, Auburn, AL, 36849

¹¹ County Extension Coordinator, Alabama Extension, Cullman, AL, 35055

¹² Extension Specialist Professor, Alabama Extension, Auburn, AL, 36849

¹³ Extension Specialist Professor, Alabama Extension, Auburn, AL, 36849

Vegetable production is one of the fastest growing segments of agriculture industry in Alabama. Alabama Extension Commercial Horticulture Program forms the basic 'knowledge infrastructure' supporting small farms across the state. Due to intense competition for early produce, many small and medium scale farms are heavily investing in high tunnels. NRCS Environmental Quality Incentives Program in Alabama has supported the construction of 129 high tunnels in 2011 and 100 tunnels in 2012 – the highest among 50 states. Another 120 high tunnels were constructed in north Alabama outside of NRCS funding, but the new producers were lacking training in protected agriculture. Commercial Horticulture Team reacted to this challenge by developing a comprehensive High Tunnel Crop Production Handbook (ANR-2157) in 2014. We are submitting one copy of the handbook to the State Chair and iBook version is available for download from Apple Store. The handbook has been funded by USDA NIFA, SARE Program, Wallace Center, Alabama Agriculture Department, and a number of different sponsors (\$18,000 in funding) for the first 1000 copies in print. Additional 500 copies are being printed and distributed to statewide agencies like NRCS, Alabama Farmers Cooperative, and Alabama Sustainable Agriculture Network due to heavy demand. This book has three sections and 26 chapters, including articles developed by producers. The iBook version has numerous videos embedded in it. Using this handbook, 310 high tunnel crop producers

were trained by Extension in 2014 resulting in 50% crop saved on small farms, equivalent to about \$1.8 million immediate impact.

Barber, T.*¹, Cartwright, R.*², Counce, P.*³, Daniels, M.*⁴, Grigg, B.*⁵, Hardke, J.*⁶, Henry, C.*⁷, Lee, F.*⁸, Lorenz, G.*⁹, Mazzanti, R.*¹⁰, Moldenhauer, K.*¹¹, Norman, R.*¹², Norsworthy, J.*¹³, Roberts, T.*¹⁴, Sadaka, S.*¹⁵, Schmidt, L.*¹⁶, Scott, B.*¹⁷, Siebenmorgen, T.*¹⁸, Slaton, N.*¹⁹, Wamisque, Y.*²⁰, Watkins, B.*²¹, Wilson, C.*²²

¹ Associate Professor and Extension Weed Scientist, University of Arkansas, Lonoke, AR, 72086

² Associate Director - Agriculture and Natural Resources, University of Arkansas, Little Rock, AR, 72204

³ Professor and Rice Physiologist, University of Arkansas, Stuttgart, AR, 72160

⁴ Professor and Extension Water Quality Specialist, University of Arkansas, Little Rock, AR, 72204

⁵ Research Associate and Rice Quality Laboratory Manager, University of Arkansas, Fayetteville, AR, 72704

⁶ Assistant Professor and Rice Extension Agronomist, University of Arkansas, Stuttgart, AR, 72160

⁷ Assistant Professor and Water Management Engineer, University of Arkansas, Stuttgart, AR, 72160

⁸ Professor (Retired) and Plant Pathologist, University of Arkansas, Stuttgart, AR, 72160

⁹ Professor and Extension Entomologist, University of Arkansas, Lonoke, AR, 72086

¹⁰ Area Extension Rice Specialist - South Arkansas, University of Arkansas, Stuttgart, AR, AR, 72160

¹¹ Professor and Rice Breeder, University of Arkansas, Stuttgart, AR, 72160

¹² Professor - Soil Fertility, University of Arkansas, Fayetteville, AR, 72704

¹³ Professor and Weed Scientist, University of Arkansas, Fayetteville, AR, 72704

¹⁴ Assistant Professor - Soil Fertility/Soil Testing, University of Arkansas, Fayetteville, AR, 72704

¹⁵ Assistant Professor and Extension Engineer, University of Arkansas, Stuttgart, AR, 72160

¹⁶ Former Area Rice Agronomist - Verification, University of Arkansas, Newport, AR, 72112

¹⁷ Professor and Extension Weed Scientist, University of Arkansas, Lonoke, AR, 72086

¹⁸ University Professor and Director - UofA Rice Processing Program, University of Arkansas, Fayetteville, AR, 72704

¹⁹ Professor and Director - Soil Testing, University of Arkansas, Fayetteville, AR, 72704

²⁰ Assistant Professor and Rice Extension Pathologist, University of Arkansas, Stuttgart, AR, 72160

²¹ Associate Professor - Agricultural Economics, University of Arkansas, Stuttgart, AR, 72160

²² Director - Rice Research and Extension Center, University of Arkansas, Stuttgart, AR, 72160

The Arkansas Rice Production Handbook is designed to provide an educational resource to rice growers and consultants in Arkansas. It provides a summary of research and extension based recommendations for best rice production practices and general information on all aspects of rice production including

production, milling, and storage.

Pachota, S.G.*¹, Amy Dabbs*², Katie Giacalone*³, Kimberly Counts*⁴

¹ , Clemson Extension, Charleston, SC, 29401

² Consumer Horticulture Agent, Clemson Extension Service, Charleston, SC, 29401

³ Directory, Center for Watershed Excellence, Clemson University, Clemson, SC, 29634

⁴ Carolina Clear/Water Resources Agent, Clemson Extension Service, Charleston, SC, 29464

The Carolina Yardstick Workbook serves as a Clemson Extension Carolina Yards resource to guide homeowners towards implementing low impact landscaping practices that can save them time and money while supporting a healthy environment. In 2014, the Workbook was rewritten; the objective for this second edition was to include updated information as well as provide links to additional resources.

Although the concept of the new workbook remained similar to the old workbook, the new book was started from scratch. Sara took lead on re-writing and updating the workbook with current information. With help from co-authors, Katie, Kim and Amy, the workbook was transformed into a 40-page full color book. Sara wrote the new content by referencing other Clemson Extension materials and laid out the new format to include imagery and graphics. Katie and Kim served as reviewers; all authors helped with initial formatting. Kim also contributed written portions of the workbook and supplied images. Other Extension Agents assisted with reviewing content. Once all information was compiled, Sara coordinated with a graphic designer to produce the final document.

The workbook is intended for residents in South Carolina. Although it is geared toward homeowners, it is also a good resource for landscape professionals, organizations and even schools. As the program continues to expand, the demand for the workbooks continues to grow. Since October 2014, 1,500 have been printed and approximately 370 have been sold. They can be purchased online, at Clemson Extension offices, and are promoted at relevant educational events.

Computer Generated Graphics Presentation

National Winner

Schieck, S.*¹

¹ Extension Educator, University of Minnesota, Morris, MN, 56267

“Overview of PED Virus” was presented to employees at United FCS - Willmar, MN on May 27, 2014. I was invited to present about Porcine Epidemic Diarrhea virus (PEDv) to inform employees so they could better relate to clients. Approximately 20 United FCS employees attended. With

PEDv first confirmed in the United States (US) in May 2013, I have had numerous requests to talk about PEDv and biosecurity. Portions of this presentation have been used to speak to manure haulers, county feedlot officers, and others.

My presentation focused mostly on PEDv, but I also talked briefly about Porcine Reproductive and Respiratory Syndrome virus so United FCS employees could better understand how the viruses affected swine production. I also spoke about biosecurity so any United FCS employee that visits swine farms could be informed.

PEDv causes severe diarrhea and vomiting that can affect pigs of all ages and quickly affects 100% of the herd. Piglets less than 7 days of age are affected the worst experiencing severe dehydration leading to death. PEDv is spread through contaminated manure. At time of presentation, sow farms experiencing PEDv were reporting virus to claim on average five weeks of production. There is no specific treatment available except maintaining hydration. Vaccines had not yet been approved. Following strict biosecurity protocols is the best way to prevent PEDv from spreading.

Presentation was developed utilizing National Pork Board's PEDv fact sheets and research-based information from a variety of sources from Land-Grant Institutions in the US.

NATIONAL FINALISTS

Yergeau, S.*¹

¹ Agriculture and Resource Management Agent, Rutgers Cooperative Extension, Toms River, NJ, 08755

This presentation is given annually to volunteers with the Barnegat Bay Shellfish Restoration Program (BBSRP) and ReClam the Bay as part of their volunteer training program. The training program covers several weeks of education on concepts such as shellfish anatomy and ecology, water quality of Barnegat Bay, and hands-on demonstration of shellfish restoration techniques. The purpose of this lecture is to introduce the nitrogen problems affecting Barnegat Bay and to discuss some of the efforts being undertaken by Rutgers Cooperative Extension as possible solutions to this problem. This lecture was presented on October 7, 2014 to 21 participants, who then went on to volunteer for the BBSRP in 2015. This lecture was fully developed as a scripted Microsoft PowerPoint presentation by Dr. Yergeau and is adapted by him as the need arises.

Pugliese, P.*¹

¹ Bartow County Extension Coordinator, University of Georgia, Cartersville, GA, 30120

This presentation was created by Paul Pugliese, Bartow County Extension Coordinator, and recorded during a live webinar on February 4, 2015 for Georgia Certified Landscape Professionals (GCLP). The GCLP program is a voluntary program offered through the UGA Center for Urban Agriculture that certifies those in the landscape profession who have mastered a thorough knowledge and understanding of job

skills required to be successful in the industry. Fifteen hours of continuing education units are required every three years to remain certified. Webinars are archived online at <http://ugaurbanag.com/webinars> for GCLP participants. This particular presentation focused on the potential for phenoxy herbicides to affect non-target trees and shrubs in landscape settings due to poor application choices by professionals. This is an issue that is commonly encountered in the landscape industry, as seen by numerous plant samples submitted to local Extension offices diagnosed with phenoxy herbicide injury. The purpose of this presentation is to raise awareness in the industry about this important issue and provide practical tips on avoiding potential damage and liability. The presentation includes forty slides and lasts sixty minutes.

Gray, S.*¹

¹ Extension Educator, Washington State University, Chehalis, WA, 98532

WSU Lewis County Extension through a collaborative partnership with community entities have created and deliver a summer program that assists at-risk students in their quest to earn scholastic credits to graduate on time with their peers. The Entrepreneurship: Introduction to Small Business and Marketing series is an integrated portion of the program in addition to the horticulture lessons and workforce prep series offered through the Cultivating Youth program. Students participate in the sowing, planting and caring for a food bank garden that supports Salvation Army clientele whose need for access to fresh, locally grown produce is met through this program. The students are learning aspects of "micro-farming," gardening as well as gaining an understanding of the elements needed to operate a small business.

Fact Sheet

National Winner

Barkley, M.*¹

¹ EXTENSION EDUCATOR, PENN STATE UNIVERSITY, Bedford, PA, 15522

The Pasture Renovation fact sheet was developed as part of a Livestock Grazing Home Study Course, a six lesson course developed to teach livestock producers how to improve their pasture management skills. The publication is part of the lesson regarding pasture management. It was designed to give an overview of the various methods than can be used by livestock producers to improve pastures. The publication is part of the third lesson on pasture management. The publication was formatted to a CD and mailed out as part of the postal version of the course and was also loaded onto a website. Thirty two livestock producers (26 via internet/email and 6 via postal service) participated in the first course last fall. As a result of participating in the course, 100% of follow

up evaluation respondents indicated they learned something new and 83% planned to make changes to their pasture management techniques. The publication was prepared using Microsoft Publisher software. Entrant wrote the publication, took photos, formatted the publication for print, and loaded the publication to the Penn State Extension website.

NATIONAL FINALISTS

Hagedorn, M.A.¹

¹ Agriculture Agent, University of Wisconsin Cooperative Extension, Eau Claire County, Altoona, WI 54720

COST OF RAISING DAIRY REPLACEMENTS-2014

This Fact Sheet was developed to help dairy producers and agribusiness professionals better understand the costs involved in raising dairy replacements. This entry was prepared and created by Mark A. Hagedorn and released in the June 2014 just prior to the 4 State Dairy Nutrition and Management Conference. A breakout session at the conference was dedicated to this material being made public. In excess of 4000 fact sheets were distributed across the state of Wisconsin during the winter meeting season for UW-Extension and the Professional Dairy Producers of Wisconsin.

Glen, C.D.^{*1}

¹ Agriculture Agent - Horticulture, NC Cooperative Extension, Pittsboro, NC, 27312

“Kudzu Bugs” is a one page - front and back - fact sheet written and designed by Charlotte Glen in response to the enormous influx of questions received by the Pender Extension Center each spring about kudzu bugs. The fact sheet is written for home gardeners and residents of southeastern North Carolina to inform them of kudzu bug identification, biology, and management practices. The original version of the fact sheet was published in March 2013, with updates and edits made by the author in March 2014. Copies were printed by the Pender County Center of NC Cooperative Extension and distributed from the local Extension office, garden centers, and during spring events and festivals. To date, a total of 1100 hard copies have been distributed. In addition, the fact sheet is posted online on the Pender Extension website and has received over 7,000 page visits as of March, 2015.

Gunn, D.^{*1}, Ronda Hirnyck^{*2}, Glenn Shewmaker^{*3}, Sherman Takatori^{*4}, Lance Ellis^{*5}

¹ Agricultural Extension Educator, University of Idaho, Fort Hall, ID, 83203

² Extension Pesticide Specialist, University of Idaho, Boise, ID, 83714

³ Extension Forage Specialist, University of Idaho, Twin Falls, ID, 83303

⁴ Pesticide Program Coordinator, Idaho State Department of Agriculture, Boise, ID, 83714

⁵ Horticultural Extension Educator, University of Idaho, St. Anthony, ID, 83445

Objective:

To educate Idaho homeowners how to identify and manage voles in lawns and landscapes.

Purpose:

The purpose is to provide information regarding vole management. Idaho is experiencing severe vole infestations, which are generally cyclical. However, as weather patterns change, vole infestations continue to increase. Voles cause extensive damage to lawns and landscapes. Homeowner calls and visits to Extension offices have increased the last two years due to increased vole infestations in 2014-15. To assist homeowners in resolving the problem, we developed a clear, easy to understand factsheet that can be distributed or downloaded as of July, 2014. It is very timely due to the fact vole populations have increased exponentially in 2014-15.

Preparation:

The entry was written by the authors and edited by the University of Idaho Editor, Diane Noel. Informal visual field surveys to identify and determine the extent of the problem were completed by several of the authors.

Distribution:

Mass emails to Idaho county offices and three Idaho Indian Reservations with a link to the publication were provided. Currently, we do not have total number of downloads or distributions. County offices have indicated they distribute the publication frequently to homeowners seeking assistance with this problem. This fact sheet was written after a much larger, regional publication regarding voles and gophers was published by the same authors in 2011. This publication has been downloaded 2,618 times. This does not take into account the number of distributions of this factsheet at public meetings and in county offices.

Feature Story

National Winner

Haley, III, N.V.^{*1}, Armstrong, Jim^{*2}, Smith, Mark^{*3}

¹ Regional Extension Agent, Alabama Cooperative Extension System, Fort Payne, AL, 35967

² Extension Specialist Professor, Alabama Cooperative Extension System, Auburn, AL, 36849

³ Associate Professor Extension Specialist, Alabama Cooperative Extension System, Auburn, AL, 36849

The relationship that has been developed between the Alabama Cooperative Extension System (ACES) and Buckmasters Ltd. (producers of the nation's most popular deer hunting magazine and television show) has been of great value to both partners and to Buckmasters nationwide viewership and more than 210,000 members. Perhaps the greatest example of the benefits of this collaboration comes in the form of articles that ACES provides that further extends Extension outreach, education, and awareness while providing Buckmasters and its members with a consistent source of non-biased, peer-reviewed, scientific information.

One such product was an article provided by ACES that headlined the cover of the September 2014 issue of *Buckmasters Magazine*. The headline, "Hunting Quality Deer May Be a Handshake Away" referenced the article titled "The Co-Op Advantage: you could be one handshake away from quality deer", which introduced readers to wildlife management cooperatives. ACES chose to provide this topic for publication as cooperation among adjoining landowners has become paramount in managing towards quality wildlife, specifically white-tailed deer, and their associated habitat. Throughout much of the country this technique of partnership is relatively unknown and underused. The article, authored by Norm Haley and edited by Dr. Jim Armstrong and Dr. Mark Smith, focused on breaking down the benefits of wildlife cooperatives and served as an explanation and template towards developing or joining an effective wildlife cooperative, in addition to outlining techniques and suggestions to make them effective and long-lived.

NATIONAL FINALISTS

LaFaive, E.*¹

¹ Horticulture Educator, UW-EXTENSION, Altoona, WI, 54720

I wrote this article for the *Wisconsin Gardening* magazine after receiving an email message from the editor requesting writers for particular topics. My objective was to write a 1000 word article about preserving and harvesting techniques for herbs in order for gardeners to enjoy their bounty year round. I blended the article content to appeal to a beginner audience and for those that are experienced and want a few extra tips. The writer is required to send pictures and sidebar ideas too. I sent seven pictures that I took personally to give them a variety to pick from and suggested some sidebar options. The article was created in Microsoft Word and the pictures were sent in separate emails as jpegs. The *Wisconsin Gardening* magazine has 7,091 subscriptions. The editor suggests doubling that number to estimate the readership at 14,182.

Melendez, M.V.*¹, Kline, Wesley L.*²

¹ Senior Program Coordinator, RUTGERS COOPERATIVE EXTENSION, Trenton, NJ, 08648

² Agricultural Agent, Rutgers Cooperative Extension, Millville, NJ, 08332

"Irrigation and Composts Pose Food Safety Risks" was published in the September 2014 issue of *Growing for Market Magazine*. This magazine focuses on sustainable market farm production, specifically fruits and vegetables. The research cited in the article was conducted as part of a USDA SCRI funded project which seeks to develop food safety metrics based on actual farm sampling throughout the United States. Fresh produce growers of all farm sizes and locations need to assess the risk for human pathogen contamination, which can occur through irrigation waters and animal manures. The article was written by Meredith Melendez and edited by Wesley Kline. *Growing for Market* magazine is a paid subscription magazine that is distributed throughout the United States via regular mail and online with 10,000 plus readers.

Overbay, A.E.*¹

¹ Extension Agent, ANR, Dairy Science, , Marion, VA, 24354

Livestock producers in Smyth County VA and across the nation have experienced some good fortune during 2014. Record beef prices along with lower than expected feed prices resulted in larger than normal profit margins and an increase in calls to the Extension Office looking for advice on how to best use this windfall. Many producers sought to replace equipment in their operations and were seeking used equipment to make dollars go farther. Two main themes led farmers to purchase equipment during this flush time: 1. Many equipment replacement purchases had been delayed during lean times and 2. operators sought to plow in profits and avoid paying higher than normal income taxes. This feature story was written to help farmers across the nation evaluate their needs and avoid the pitfalls of purchasing used equipment. The article was published by *Progressive Forage Growers Magazine* and distributed to 45,000 subscribers nationwide and in Canada. Electronic versions are published and distributed to 10 different countries around the world. The article can be accessed on line at:<http://www.progressiveforage.com/forage-production/equipment/mechanics-corner-buying-used-equipment>

Learning Module

National Winner

Moncada, K.M.*¹, Sackett, J.L.*², Sheaffer, C.C.*³, Coulter, J.A.*⁴, Gunsolus, J.L.*⁵, Jacobson, A.J.*⁶, Lamb, J.A.*⁷

¹ Scientist, University of Minnesota, St. Paul, MN, 55108

² Extension Educator, University of Minnesota Extension, Mankato, MN, 56001

³ Professor, University of Minnesota, St. Paul, MN, 55108

⁴ Associate Professor, University of Minnesota Extension, St. Paul, MN, 55108

⁵ Professor, University of Minnesota Extension, St. Paul, MN, 55108

⁶ Ph.D. Student, University of Minnesota, St. Paul, MN, 55108

⁷ Professor, University of Minnesota Extension, St. Paul, MN, 55108

Corn is one of the most important crops in Minnesota and the United States. Most Americans consume or use its products every day. Even so, many adults and youth have little to no understanding of the corn plant and its history, production, and uses. The *All About Corn* e-learning modules were developed to provide an interactive educational opportunity for secondary and post-secondary students to learn more about agriculture and corn production. They can be integrated into online or classroom courses such as crop production, biology, and botany and could be especially useful for “flipped classrooms.” The modules utilize various forms of audio and visual enhancements and interactive quizzes to reach people of all learning styles and can be watched at the convenience of the individual. Though geared towards students, any person interested in learning more about corn production has access to the modules. The *All About Corn* e-learning modules are available at <http://www.allaboutcorn.umn.edu/> and are hosted on University of Minnesota Extension’s corn website. The *All About Corn* website also includes an evaluation survey to gauge user interest, understanding, and background. Each of the modules (Corn Uses, Corn Production, Biology of Corn, and Corn Breeding) was prepared using Adobe Presenter. The author’s contribution includes draft narrative, visual and quiz development for two modules, review and editing of all modules, and audio narration of three modules.

NATIONAL FINALISTS

Quinn, J. T.*¹, Trinklein, D. H.*², Denkler, S. R.*³, Giesel, S.*⁴, Debates, P.*⁵

¹ REGIONAL HORTICULTURE SPECIALIST,
UNIVERSITY OF MISSOURI EXTENSION, Jefferson
City, MO, 65101

² Associate Professor of Plant Sciences, University of
Missouri, Columbia, MO, 65211

³ Regional Horticulture Specialist, University of Missouri
Extension, Poplar Bluff, MO, 63901

⁴ Instructional Designer, University of Missouri Extension
Technology and Computer Services, Columbia, MO, 65211

⁵ Instructional Designer, University of Missouri Extension
Technology and Computer Services, Columbia, MO, 65211

Adapting the Missouri Master Gardener in person training to an online format began in 2011, led by entrants Quinn and Trinklein. Extension administration provided \$32,700 of support, in part for curriculum development by two MU graduate students (agricultural education). The existing manual (MU Extension publication <http://extension.missouri.edu/p/CB19>) is central to the program; all 14 chapters are available online. While corresponding PowerPoint were available for each, they were revised and standardized for online delivery. Four regional and five state specialists scripted and recorded chapter presentations, termed sessions (Quinn and Trinklein accounted for six). Sessions are broken into short modules, varying from three to nine; modules range from five to 30 minutes in length. Moodle (an open-source web application)

was selected by MU’s Extension Technology and Computer Services (ETCS) to offer the training. Tests of ten questions were incorporated into each session, with an average minimum score of 70% required to pass. Enhancing delivery are video clips and group participation, encouraged through a chat room and session questions. The course is offered for \$175, follows MU’s fall or spring semesters, and began in fall of 2013 (<http://extension.missouri.edu/mg/home.aspx>). The small first class of six served as a test run. Enrollment has increased, 25 for spring 2014, 51 for the fall and 62 for spring 2015. Entrants Trinklein or Denkler facilitate each class (less than 35) and ETCS handles technical issues. Evaluations at semester conclusion indicate satisfaction; 80% have successfully completed. Getting online students active in local chapters presents some challenges.

Bauer, E.C.*¹, Blanco, H.*², Gaussoin, R.E.*³, Hansen, P.J.*⁴, Holding, D.R.*⁵, Hyngstrom, J.R.*⁶, James, T.L.*⁷, Kalisch, J.A.*⁸, Killinger, E.M.*⁹, Korus, K.A.*¹⁰, Mamo, M.*¹¹, McCallister, D.L.*¹², Ogg, C.L.*¹³, Orellana, I.*¹⁴, Reicher, Z.J.*¹⁵, Rodie, S.N.*¹⁶, Streich, A.M.*¹⁷, Timmerman, A.D.*¹⁸, Todd, K.A.*¹⁹, Vantassel, S.M.*²⁰, Wortmann, C.S.*²¹

¹ Extension Associate, Nebraska Extension, Lincoln, NE, 68583

² Assistant Professor of Soil Science, University of Nebraska-Lincoln, Lincoln, NE, 68583

³ Professor and Department Head of Agronomy and Horticulture, University of Nebraska-Lincoln, Lincoln, NE, 68583

⁴ Former Extension Assistant, Nebraska Extension, Lincoln, NE, 68583

⁵ Assistant Professor, University of Nebraska-Lincoln, Lincoln, NE, 68583

⁶ Extension Project Manager, Nebraska Extension, Lincoln, NE, 68583

⁷ Extension Assistant, Nebraska Extension, Lincoln, NE, 68583

⁸ Entomology Extension Associate, Nebraska Extension, Lincoln, NE, 68583

⁹ Extension Educator Hall County, Nebraska Extension, Grand Island, NE, 68801

¹⁰ Extension Educator, Nebraska Extension, Lincoln, NE, 68583

¹¹ Professor of Soil Science, University of Nebraska-Lincoln, Lincoln, NE, 68583

¹² Professor of Soil Science, University of Nebraska-Lincoln, Lincoln, NE, 68583

¹³ Extension Educator, Nebraska Extension, Lincoln, NE, 68583

¹⁴ Extension Assistant, Nebraska Extension, Lincoln, NE, 68583

¹⁵ Former Extension Turfgrass Specialist, Nebraska Extension, Lincoln, NE, 68583

¹⁶ Former Extension Landscape Horticulture Specialist, Nebraska Extension, Omaha, NE, 68182

¹⁷ Associate Professor of Practice, University of Nebraska-Lincoln, Lincoln, NE, 68583

¹⁸ Extension Educator Holt/Boyd Counties, Nebraska

Extension, O'Neill, NE, 68763

¹⁹ Extension Landscape Specialist, Nebraska Extension, Lincoln, NE, 68583

²⁰ Wildlife Project Coordinator, University of Nebraska-Lincoln, Lincoln, NE, 68583

²¹ Professor of Soil Science, University of Nebraska-Lincoln, Lincoln, NE, 68583

The Extension Master Gardener Program has been a part of Nebraska Extension since 1976. The major components of the Nebraska Extension Master Gardener (EMG) program are horticulture education and volunteer service. New EMGs are required to have 40 hours of education and 40 hours of volunteer service in the initial year of training. Returning EMGs are required to have a minimum of 10 hours of education and 20 hours of volunteer service each year to maintain their Master Gardener status. EMGs are encouraged to assist with horticulture-related programs and projects at Nebraska Extension offices and in their local communities with research-based education given through the program. Currently, there are over 474 active Extension Master Gardener volunteers in Nebraska.

^{*1}, Daniels, M.^{*2}, Saraswat, Dharmendra^{*3}, Teague, Katie^{*4}, Vandevener, Karl^{*5}

¹ , , , ,

² Extension Water Quality and Nutrient Management, Little Rock, AR, 72204

³ Extension Specialist, University of Arkansas, Fayetteville, Ar, 72701

⁴ County Agent - Water Quality, University of Arkansas, Fayetteville, Ar, 72701

⁵ Extension Specialist - Engineering, University of Arkansas Division of Agriculture, Little Rock, Ar, 72204

The Arkansas Watershed Stewardship Handbook is a bound, 150- page, full color publication that contains six learning modules to educate citizens about how to manage and protect water resources in their watershed. It is utilized as the training curriculum for a full - day training workshop to empower local citizens to organize their communities to voluntarily protect their water resources. It overviews the science of water quality, watershed management and community organization. The Handbook has been used in training sessions all over the State of Arkansas. The development of the Handbook was made possible by a grant provided by EPA.

Newsletter, Individual

National Winner

Lyndsay Ploehn

Extension Educator

Purdue Extension

Porter County

Lyndsay Ploehn, Purdue Extension Associate Educator in

Porter County, was needing a way to communicate with Master Gardeners. Porter County has a large following of Master Gardeners (115) in the Porter County Master Gardener Association, but almost 200 Master Gardeners are not members of the association and still need information. The Garden Thyme newsletter was created to inform all Porter County Master Gardeners of current garden information, volunteer and education information, and to introduce Master Gardeners to each other by highlighting projects, recipes, and gardening tips. The newsletter is distributed by email to 300 Porter County Master Gardeners as well as to 300+ surrounding county Master Gardeners. It is also available on the Purdue Extension Porter County website: www.extension.purdue.edu/porter

NATIONAL FINALISTS

Tyler Williams

Extension Educator

University of Nebraska-Lincoln

Lancaster County

The Nebraska Ag Climate Update newsletter was initiated in December 2013 to bring climate and weather information to the Nebraska farmer. Climate and weather information is available in a number of locations and formats, and this newsletter brings the pertinent information desired by farmers to one location. This three page newsletter provides climate information, trends, and predictions that help farmers analyze their current situation, as well as assist them with future management decisions. Data, maps, charts, and graphs are key features to this newsletter, which is designed to be visually appealing to the reader. This monthly newsletter is distributed through UNL CropWatch email listserv (3,119 subscribers), Twitter (2,317 followers), and the CropWatch website (663,936 page views in 2014).

Colin Massey

CEA-Agri/Water Quality

Interactions and activity within the Lake Fayetteville Watershed is diverse, whether it is for boating, hiking, bicycling, a place of business, or a residence. These stakeholders play a critical role in the health of the water in Lake Fayetteville, and thus its value as a natural and public resource. A newsletter began in December 2013 that focuses on improving water quality and informing readers on best management practices for pollution prevention, anecdotes about the lake, and promotion of events for raising stakeholder involvement and awareness. Thus far, five newsletters have been mailed to 2,935 residents who live in the watershed, with an additional 350 sent to electronic subscribers. The April issue featured promotion for an upcoming waste removal event, common algae problems stemming from pollution, grass cycling and proper lawn management to prevent water pollution, and a guest article informing readers of a prairie restoration project. The July issue promoted water quality best management practice programs, offered one-on-one home visits to assess soil or water issues, and provided

an update of stakeholder involvement in cleanup activities around the lake. These newsletters are a critical link to engage watershed stakeholders and provide an avenue to disseminate educational and programmatic information. Analytics from the newsletter software MailChimp indicated an overall open rate of 27% (industry average 23%). Additionally, a number of program participants have contacted the extension office for home assistance or to participate in a best management practice workshop as a result of the newsletter.

Rebecca Hellmuth

Clemson Extension
Dorchester and Berkley

Rebecca Hellmuth, a row crops extension agent for Clemson University in South Carolina, writes a newsletter entitled the “Dorchester/Berkeley County Crop Update.” Ms. Hellmuth’s responsibilities include Dorchester and Berkeley Counties in southeastern South Carolina. The bi-weekly newsletter covers timely, local information for row crop growers around St. George which is the primary area of crop production in the two counties. Each issue of the newsletter focuses on a certain crop (corn, cotton, soybeans, or peanuts) or other relevant issue related to farming such as soil sampling, nematode management, and Farm Bill decisions. On page 2 of the newsletter, the article series called “Closer Look” provides scientific explanation in layman’s terms of soils topics – Ms. Hellmuth’s specialty. The newsletter also provides information on events for Clemson Extension, SC Department of Pesticide Regulation, USDA Farm Service Agency, Natural Resource and Conservation Service, and SC Department of Agriculture. Ms. Hellmuth sends out the newsletter by email to 125 recipients composed of growers, industry representatives, and other extension agents and specialists and by mail to 14 growers who do not have email accounts. She distributes the newsletter to the USDA Farm Service Agency office and the local farm supply. Ms. Hellmuth writes and prepares each issue using Microsoft Publisher. The newsletter provides more consistent communication with growers, increased grower awareness of Clemson’s current research, and industry advances in farming technology, and better contact with industry representatives. Since Ms. Hellmuth began writing the newsletter, she has seen increased attendance at her extension programs.

Newsletter, Team

National Winner

Buehl, Eric*¹, Dindinger, Jennifer*², Rockler, Amanda*³, Takacs, J.*⁴, Varsa, Krisztian*⁵

¹ Watershed Restoration Specialist, University of Maryland Extension - Sea Grant, , ,

² Watershed Restoration Specialist, University of Maryland Extension - Sea Grant, , ,

³ Watershed Restoration Specialist, University of Maryland Extension - Sea Grant, , ,

⁴ Watershed Restoration Specialist, University of Maryland Extension - Sea Grant, , ,

⁵ Watershed Restoration Specialist, University of Maryland Extension - Sea Grant, , ,

Headwaters is the electronic newsletter written, edited, and published quarterly by the University of Maryland Sea Grant Extension’s Watershed Protection and Restoration Program (WPRP) team. In its first year (2014), the newsletter increased program visibility, collaborative opportunities, and new partnerships.

With an audience of more than 5,000 readers, *Headwaters* provides a platform to share programs and projects with colleagues from partner agencies and organizations in the Chesapeake Bay watershed. *Headwaters* keeps pace with the evolving landscape of watershed restoration by addressing relevant topics in watershed restoration & climate science, education, programming, projects, and research. *It* also highlights the programs and projects of partner organizations and in doing so emphasizes the collaborative efforts of the WPRP team and demonstrates the breadth of coverage the team can offer. Articles are short, typically 300 - 500 words, with numerous hyperlinks to partners’ webpages, scientific articles, and contact emails and written to be accessible to a wide array of readers, from science professionals to community members. This format makes the newsletter engaging and increases its impact. Additionally, some hyperlinks lead readers to alternate locations within the newsletter, making it easier for them to connect themes by topic or by geography.

Headwaters’ distribution mechanism is entirely digital and includes regional email listservs, the Chesapeake Network listserv, the UMD Extension website, the team’s website, the Maryland Sea Grant website, Twitter, and an Extension Facebook page.

Team members include: Eric Buehl, Jennifer Dindinger, Amanda Rocker, Jacqueline Takacs (NACAA member), Krisztian Varsa (ed).

NATIONAL FINALISTS

Wantoch, K.L.*¹, Clark, Jerome*², Hagedorn, Mark*³

¹ Agriculture Agent Specializing in Economic Development, UW-Extension - Dunn County, Menomonie, WI, 54751

² Crops and Soils Educator, UW-Extension Chippewa County, Chippewa Falls, WI, 54729

³ Agriculture Agent, UW-Extension Eau Claire County, Altoona, WI, 54720

The UW-Extension Chippewa Valley Agricultural Extension Report newsletter is a joint newsletter published by the agriculture agents of UW-Extension offices in Chippewa, Dunn and Eau Claire counties in Northwest Wisconsin. This newsletter is produced and distributed 2-3 times each year. Newsletters are emailed by the county agents to over 300 email addresses in their listserv database or utilizing MailChimp (online email marketing and list manager program); mailed by each office to over 1,500 county residents; and posted to each

of the Chippewa, Dunn and Eau Claire County UW-Extension websites for available download by the public. County agents provide articles for the newsletter based on research they are conducting with UW-Extension state specialists; recent concerns by clientele, such as field crop conditions or livestock viruses; and proposed changes in the agriculture industry that clientele need to be made aware of. Newsletters may also include promotional materials, information or calendars for upcoming UW-Extension related workshops and events. County agents work with Microsoft Office (Word or Publisher documents) to draft the articles, submit to agent Wantoch for formatting in a Publisher document, and the newsletter is finalized into an Adobe Acrobat *.pdf file for publication. Team members of the UW-Extension Chippewa Valley Agricultural Extension Report newsletter include Chippewa County crops and soils educator Jerry Clark, Dunn County agriculture agent Katie Wantoch and Eau Claire County agriculture agent Mark Hagedorn.

Petzen, J.S.*¹, Gasiewicz, D. R.*², Welch, D. J.*³, Wood, A. M.*⁴

¹ AGRICULTURE DEPARTMENT PROGRAM LEADER, CORNELL UNIVERSITY COOPERATIVE EXTENSION, Warsaw, NY, 14569

² Community Educator for Horticulture and Natural Resources, Cornell University Cooperative Extension of Wyoming County, Warsaw, NY, 14569

³ Program Educator for Direct Marketing and Natural Resources, Cornell University Cooperative Extension of Wyoming County, Warsaw, NY, 14569

⁴ Agricultural Economic and Workforce Development Educator, Cornell University Cooperative Extension of Wyoming County, Warsaw, NY, 14569

Wyoming County Farm and Homestead News reaches out to agricultural producers, gardeners and rural residents. Published six times each year, this newsletter keeps people in the Wyoming County community apprised of emerging issues facing farmers, shows the impact of extension educational activities and notifies readers of upcoming educational opportunities. Having a multifaceted newsletter allows us to share information among both the farming community and local residents, who are frequently farm neighbors. Supplying contact information for our team of educators and regional specialists keeps that information ready at hand for readers to reach out to Extension for help addressing issues in their farm or in their garden. Distributed both by mail and, with our “go green” option, electronically. Electronic readers receive an e-mail with a password to the latest issue. Each issue we distribute 190 copies via mail and 21 electronically. Recent graphic improvements yield a more inviting newsletter for readers. Our local extension team strives to provide timely updates and attract participants to educational events with the *Wyoming County Farm and Homestead News*.

Hicks, R.*¹, Knight, C.*², Ingram, S.*³, Lovett, W.*⁴, Ward, B.*⁵, Kichler, J.*⁶, Ray, L.*⁷, Smith, W.*⁸, Morgan, S.*⁹, Edwards, N.*¹⁰

¹ County Extension Coordinator, University of Georgia, Sylvania, GA, 30467

² County Extension Agent, University of Georgia, Statesboro, GA, 30458

³ County Extension Agent, University of Georgia, Springfield, GA, 31329

⁴ County Extension Coordinator, University of Georgia, Alma, GA, 31510

⁵ County Extension Agent, University of Georgia, Colquitt, GA, 39837

⁶ County Extension Coordinator, University of Georgia, Moultrie, GA, 31788

⁷ County Extension Coordinator, University of Georgia, Madison, GA, 30650

⁸ County Extension Coordinator, University of Georgia, Thomaston, GA, 30286

⁹ County Extension Coordinator, University of Georgia, Hamilton, GA, 31811

¹⁰ County Extension Coordinator, University of Georgia, LaFayette, GA, 30728

The ‘Forage Team Newsletter’ is a collaborative effort of the UGA Forage Extension Team (FET) to provide timely information on forage based topics to county agents and forage producers throughout the state. The FET is comprised of 10 agents, representing all areas of the state, which have specific forage knowledge. This quarterly newsletter is distributed to all 159 counties via the agent listserv and is also sent out by the State Extension Forage Specialist via MailChimp to subscribers to GeorgiaForages.com Updates, with 360+ subscribers. Subscribers include producers, industry members and media representatives. Members of the FET meet to discuss and plan the newsletter for the year. Deadlines and topics of interest are laid out. Space is saved for responsive forage issues, events and announcements. Newsletters contain 3-5 articles written by members and edited by a designated team member. Articles from the Forage Team Newsletter often get picked up by national farm industry magazines. Comments from agents in the state have been very positive about the usefulness of the newsletter. One example is, “This is exactly the kind of fodder (no pun intended) we need in our counties. This newsletter is in a format that I can share with our local forage producers, cattlemen, etc. I can also break this down and use this as part of my weekly column in the local newspaper and credit my colleagues for their work. Thank you, thank you, for your forward thinking approach to sharing this information and making all our jobs easier!”

Personal Column

National Winner

Hicks, R.*¹, Knight, C.*², Ingram, S.*³, Lovett, W.*⁴, Ward, B.*⁵, Kichler, J.*⁶, Ray, L.*⁷, Smith, W.*⁸, Morgan, S.*⁹, Edwards, N.*¹⁰

¹ County Extension Coordinator, University of Georgia, Sylvania, GA, 30467

² County Extension Agent, University of Georgia, Statesboro, GA, 30458

³ County Extension Agent, University of Georgia, Springfield, GA, 31329

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NATIONAL FINALISTS

John A. Wilson

Extension Educator

Nebraska Extension in Burt County

Burt County

I am an Extension Educator with an agronomic programming focus (crop production and pasture management) in a rural eastern Nebraska county. I have been asked by the editors of our local newspapers to vary the content of my weekly columns so I cover topics that would be of interest to farmers as well as acreage and town residents. These columns are distributed electronically to three local weekly newspapers (circulation 580, 927 and 1552), one bi-weekly "rural shopper" (circulation 15,000) which reaches residents in 10 counties in eastern Nebraska and western Iowa, and one northeast Nebraska news website (<http://katcountryhub.com>). Columns are also posted on the Burt County Extension website (<http://burt.unl.edu/>) and can be viewed there. The objective of my weekly personal column is to provide timely, educational information for my readers in an interesting and entertaining format. Years of experience has shown that my best feedback comes when I intersperse humor in my columns. My columns usually focus on agricultural and horticultural topics. I select topics based on questions I receive in my office, or anticipate receiving in the next few weeks if I want readers to be proactive in addressing a subject. My audience includes older youth through retirees that may be engaged in farming, an agricultural-related business, or are taking care of their landscape or garden. The content of the weekly columns included here (and most of my columns) is all original material, mainly because nobody else would claim it.

John Porter

Extension Agent

WVU Extension Service

Kanawha

For nearly two years, I have used my role as the garden writer for the Sunday Charleston Gazette-Mail, West Virginia's most widely distributed newspaper, to inform individuals in my county, region, state, and beyond. My weekly column focuses on timely garden issues interjected with humor, wit, history, and more. The paper has a print readership of 180,000 individuals with 440,000 monthly online visitors. In addition I archive my articles at my own site (wvgardenguru.com) to share through social media and other avenues. In 2014 and 2015, my articles have been featured on the Extension Master Gardener and eXtension Garden Professors blogs and social media pages reaching thousands of additional readers in several countries. The two articles submitted were each recently featured by these groups and created interesting discussions about history and science. The owner and executive editor of the newspaper has personally told me that this is the best column that the newspaper has had in its history of print. The article has had a major impact on the visibility of extension programming in the county and serves as a major part of my service outreach.

Jennifer Pelham

Residential Horticulture Agent III.
University of Florida
Orange County Extension

The Home and Garden column was written to educate the residents of Osceola County, Florida on various horticultural topics from August 2012 to May 2014. Timely horticulture topics were discussed, such as “Hurricane preparedness in the landscape” and “Protecting the home from termite season” and home horticultural practices, such as “Selecting the right plant for the right place” and “Growing vegetables in containers”. Along with informing readers on specific horticultural topics, this column was also used to create awareness of the UF/IFAS Osceola County Extension and the services it offers, as well as promoting educational workshops and directing horticultural related questions to the Master Gardeners’ Plant Clinic. The horticulture agent wrote the column once a week. It was emailed to the newspaper’s senior editor, where it was edited, titled, and published in the Thursday edition of the Osceola News Gazette. The Osceola News Gazette has a circulation of 46,000. It is distributed free of charge to homes, businesses, and newsstands throughout the county.

Program Promotional Piece

National Winner

Maginot, J.*¹, Meux, Chris*²

¹ Program Associate - Urban Storm Water Education, ,
Fayetteville, AR, 72704

² Graphic Designer, UACES, Little Rock, AR, 72204

UpStream Art, a project of the University of Arkansas Division of Agriculture Cooperative Extension Service, is an educational program which uses art to communicate the function and importance of storm drains. UpStream Art gives artists the opportunity to express themselves with semi-permanent public art in the form of a small-scale outdoor storm drain mural. The purpose of the project is to draw attention to the usually discreet concrete and iron infrastructure with the hope that people stop and think about where the water flows after it enters a storm drain and what possible pollutants that water might contain.

We needed a promotional item for the project that would also work as an educational tool when we decided to create a calendar that would be visually appealing yet educational. Each month discusses an issue with stormwater management and gives a Best Management Practice to help mitigate this problem. The educational material is coupled with a mural from our project and a picture of the watershed in which that particular drain flows into.

A total of 1200 calendars were printed and distributed to local mayors, city councils, planning departments, watershed organizations, educational institutions, art galleries, community organizations, and local chambers of commerce. They were

also used as door prizes and table “swag” at events. The calendars were so well received that I have seen them hanging across the two county area they were distributed and even had one chamber of commerce insist on receiving a storm drain mural for the 2015 year!

NATIONAL FINALISTS

Bartlett, K.*¹, Mehlenbacher, Stephanie*²

¹ DAIRY & LIVESTOCK EDUCATOR, , Bath, NY, 14810

² Horticulture Community Educator, Cornell Cooperative Extension of Steuben County, Bath, NY, 14810

The Steuben County Farm Guide was created and distributed to meet the growing demands of area residents seeking to purchase local food. Cornell Cooperative Extension Ag staff were receiving requests with increasing frequency on where and how to find farms, especially those selling local meats who might not attend traditional farmers’ markets. The Farm guide was designed, in part, to give greater exposure to farms who do not regularly participate in highly visible public markets, but rather market from the farm. Steuben County is the second largest county in New York State with more than 1400 square miles. The sheer size and rural nature of the county make it difficult for residents to find local farms who offer farm products for sale.

The Steuben County Farm Guide also calls attention to the growing number of farmers’ markets in the county and to the burgeoning farm brewery industry within the county.

The 2014 Steuben Farm Guide includes 59 individual farms selling meat, dairy, maple, honey, trees, fruits, vegetables, and more. The farm guide includes 16 wineries and 4 breweries; highlighting a new agricultural industry that has taken root in Steuben County.

Five Thousand Farm Guides were printed and distributed to libraries, hotels, wineries, breweries, farm markets, farm stands, and other points of interest in the county. The popularity of the guide was realized when all the guides were distributed in five months’ time and requests from a dozen additional farms to be included in subsequent printings were quickly received.

Glen, C.D.*¹

¹ Agriculture Agent - Horticulture, NC Cooperative Extension, Pittsboro, NC, 27312

This flier was produced by the applicant to promote two seed starting workshops held in March 2014 for gardeners in southeastern North Carolina. The flier was formatted in Microsoft Publisher and copies were printed at the local Extension office. Forty-two copies were posted at garden centers, libraries, and public places throughout Pender County. A total of 99 residents participated in the workshops, which provided hands-on experience starting and transplanting flower and vegetable seeds and seedlings. In an exit survey, 100% of participants reported they gained knowledge and skills that will help them successfully grow a wider range of plants from seed.

Richter, R.E.¹, Winski, P.J.¹

¹ Extension Agent-Horticulture, Texas A&M AgriLife Extension, Harris County, Houston, Texas 77084

The program promotional piece was developed for the inaugural Greater Houston Plant Conference that was held on Friday, September 12, 2014 at the Texas A&M AgriLife Extension Office in Bear Creek Park 3033 Bear Creek Drive, Houston, TX. The conference was a regional event and provided a platform for the green industry (greenhouse and nursery growers, landscapers and garden center retailers) plant collectors and enthusiasts to come together for an overview of new plant introductions. University researchers and industry professionals provided the information at the conference. The conference included the following topics: 1) 50 trees or shrubs you shouldn't live without, 2) state of the green industry: current economic and marketing trends, 3) 50 perennials you can't live without, 4) innovation process: rose and peach breeding at Texas A&M University, 5) new varieties from PanAmerican Seed and 6) ornamental trials in Harris County. Approximately 200 hardcopies of the promotional piece were distributed throughout Harris and surrounding counties. To increase the reach of the piece and utilize the contacts and mailing lists of the Horticulture Program Area Committee, an electronic version was also emailed to potential participants. The program was also promoted via social media on the Texas A&M AgriLife Extension – Harris County Horticulture Facebook page <https://www.facebook.com/HarrisCountyHorticulture>. The conference was a success with 90 people participating along with 5 vendors.

Publication

National Winner

Boyd, J.W.*¹, Griffin, B.*²

¹ Extension Specialist, University of Arkansas Cooperative Extension Service, Little Rock, AR, 72203

² Cea-StaffChair, , Clarksville, AR, 72830

Properly applied weed control is one of the most cost effective management practices available to pasture farmers. Many weed control practices are cheap when compared to other pasture improvement methods.

Pest identification is a major component of integrated pest management (IPM). This publication was developed for forage producers to properly identify the weed pests, apply the proper herbicide at the right rate and proper growth stage. The publication was distributed to 423 producers at 7 county forage meetings. Based on surveys conducted at forage meetings, producers feel that color pictures in a publication is the best tool for proper weed identification. The publication contains 65 of the most common weeds in Arkansas forage.

Griffin and Dr. Boyd have conducted hundreds of forage weed control research demonstrations for over 20 years, and the results of the demonstrations provides the recommendations

presented in the publication. the publication also contains information on application methods, equipment and additives.

NATIONAL FINALISTS

McFarland, A.*¹, Isleib, James*², Freed, Russell*³, Kapp, Christian*⁴, Graham, Scott*⁵

¹ Extension Educator, Michigan State University, Chatham, MI, 49816

² Field Crops Extension Educator, Michigan State University Extension, Munising, MI, 49862

³ Professor, International Agronomy, Michigan State University, East Lansing, MI, 48824

⁴ Research Assistant, MSU Upper Peninsula Research and Extension Center, Chatham, MI, 49816

⁵ Director, Michigan Brewers Guild, Lansing, MI, 48933

Due to an increasing demand for locally sourced ingredients in everything from the salads we eat to the beer we drink, barley, produced for malt, is being revisited as a potential crop for Michigan growers. This publication explores that potential and outlines best production practices for Michigan-grown malting barley. Although barley is a crop that has been historically grown in the state for generations, much of the acreage over the years has been replaced by other high-valued cash crops such as corn and soybeans with most barley marketed as a feed product. Achieving high quality malting barley requires a much different management approach, and this publication is being used to instruct growers on those practices so that they can successfully supply malting barley to in-state markets. The primary audience is the farmers growing barley, but it has also been widely distributed to craft maltsters and brewers in the state so that they have a better understanding of what it takes to achieve a high quality grain product. Over 200 hard copies have been distributed, with another 100+ distributed electronically. The publication is available on our website where the download occurrence is unknown. A team of Extension Educators and researchers at Michigan State University came together to write, assemble figures, layout and design the publication, with McFarland as the lead. A leader in the craft brewing industry was also asked to submit material to provide a market perspective. In-house communication services were utilized for the final design and layout.

Byers, Patrick L.*¹, Cernusca, Mihaela M*², Godsey, Larry D*³, Gold, Michael A.*⁴, Thomas, Andrew L.*⁵

¹ Regional Horticulture Specialist, University of Missouri Extension, Springfield, MO, 65807

² Research Specialist, University of Missouri Center for Agroforestry, Columbia, MO, 65211

³ Research Specialist, University of Missouri Center for Agroforestry, Columbia, MO, 65211

⁴ Professor, University of Missouri Center for Agroforestry, Columbia, MO, 65211

⁵ Assistant Research Professor, University of Missouri, Mount Vernon, MO, 65712

Growing and Marketing Elderberries in Missouri (AF1016) is a 12-page production and marketing guide published through the Center for Agroforestry, University of Missouri, in 2012 and revised in 2014. The publication summarizes 17 years of research and experience with elderberry production and marketing in Missouri. The guide is the most comprehensive publication of its type currently available in the US, and includes in-depth information on elderberry site selection and preparation, production, pest management, harvest and handling, marketing, and budgeting. The publication is a collaborative effort among faculty and staff of the University of Missouri Extension, University of Missouri Division of Plant Sciences, and University of Missouri Center for Agroforestry. The intended audience is prospective and established elderberry farmers, elderberry marketers, and elderberry processors in Missouri and elsewhere. The guide is also in use among elderberry researchers, as well as extension and outreach specialists who serve elderberry farmers and processors. The current 2014 online edition, released on 4.11.14, has received 61,750 views as of 1.22.15. Several thousand printed editions of **Growing and Marketing Elderberries in Missouri** have been distributed to farmers and other elderberry interests since 2012.

Hoorman, J.*¹, Hoormann, R.*², Noggle, S.*³, Young, C.*⁴, Sundermeier, A.*⁵, Islam, R.*⁶

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⁵ Associate Professor, Ohio State University, Bowling Green, OH, 43402

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Extension professionals and university specialist from 12 Midwest universities and the University of Guelph, Ontario, Canada associated with the Midwest Cover Crops Council (www.mccc.msu.edu) contributed to a 161 page reference guide entitled: *Midwest Cover Crops Field Guide, 2nd Edition, ID-433*, published by Purdue University (38,000 copies sold). This book explains how farmers may use cover crops to improve soil health, prevent erosion, improve nutrient recycling, sustain their soils, and protect the environment. Major chapters include Choosing Cover Crops (1-15), Cover Crop Mixtures, Rotations, Seeding Methods (16-24), Managing Cover Crops (24-29), Herbicide Carryover Concerns (29-34), Cover Crop Insect and Disease Concerns (36-41), Soil Fertility, Climate, and Crop Insurance (41-46), and Cover Crop Species: Grasses (47-89), Legumes (90-117), Broadleaves (118-137), Upcoming Species (138-145), and Other topics (146-161). Under each cover crop species, helpful farmer information includes basic plant and seed characteristics, seeding rates and methods, soil and environmental tolerances, cover crop termination,

and cover crop benefits. The book is illustrated with color photos, short cover crop management tips, and sells for \$5 at local Extension offices. NACAA Extension professionals assisted with this expert reviewed reference guide by assisting with writing and editing major sections on seeding methods, manure and biosolids, herbicide carryover, individual cover crops, upcoming species, and supplying color photographs. This reference guide was a joint effort between university extension personnel, university specialist, government agencies, and farmers to produce a useable tool to assist in growing cover crops successfully while improving the soil and the environment.

Published Photo & Caption

National Winner

Laura Siegle

Extension Agent

Virginia Cooperative Extension

Amelia County

Farm stories posted on the Central Virginia Ag Spotlight blog feature photographs from agricultural operations to reinforce the educational information in each article and to portray farm life or farm practices. The Amelia County agent authors the articles and performs the photography for each. Photos are edited, arranged in the blog layout, and captioned appropriately. The agent uses a Canon Rebel T3 DSLR to take these photographs. The January 9, 2015 blog story featured Maple Dell Farm, a dairy. The intent of the story was to share information about common dairy cattle management practices with readers and discuss the chores and activities that take place on one particular farm. Consumers frequently express questions and concerns regarding dairy farm management but rarely have opportunities to visit farms, so exploring farm practices through stories and photos is one means for sharing information about the industry. This photograph and the other photos in the article provide an explanation of how calves and cows are managed to ensure welfare, comfort, and good health. The link to the photo and story was shared via a county Extension newsletter and Facebook. It was «liked» at least 58 times and «shared» 21 times within the week it was posted. As a result of social media sharing, the blog where the photo appears received 668 pageviews during the first week after the Maple Dell Farm story was posted. The article, photograph, and original caption can be viewed online at <http://blogs.ext.vt.edu/central-virginia-ag-spotlight/2015/01/09/meet-maple-dell-farm/>.

NATIONAL FINALISTS

Lizabeth Stahl

Extension Educator - Crops

University of Minnesota

Severe storms passed through southwestern Minnesota on June 16, 2014. Fields of healthy crops were mowed down by

hail, over 10 inches of rain fell in areas, and wind speeds up to 60 to 70 mph were reported. After assessing the damage, it was evident many fields were a total loss. The late date of the storm, wet soil conditions, and the fact that herbicides had already been applied in many fields limited options for farmers. Articles and resources on assessing hail damage and options were posted and distributed by U of MN Extension and a Hail Clinic was held on a farm site by some of the hardest hit fields. The storm damage caught the eye of news organizations across the state and a reporter from the Minneapolis Star Tribune interviewed me about the storm damage. I sent him three photos I took highlighting the crop damage and flooding. Captions the paper printed were: "Heavy rains are drowning crops in southwest Minnesota and leaving farmers with no choice but to assess the damage and call their insurance agents", "Hail damaged corn fields on Wednesday near Leota, Minn., 200 miles southwest of the Twin Cities", and "Wind-driven hail trashed the plants in this cornfield in Nobles County in the southwest corner of Minnesota". The article and all three photos were printed on the first and second page of the Business section of the Minneapolis Star Tribune (circulation of 300,495) on June 20th, 2014.

Carol Schurman

Extension Educator - 4-H/Youth
Penn State Extension
Indiana

Objective - to share photos that show experience of day campers at Indiana County 4-H day camps

The theme for Indiana County 4-H day camps in 2014 was "Go Wild". The 4-H newsletter featured a page of photos from the day camps. (page 7 in attached newsletter) Campers are shown with snack, exploring owl pellets, exploring the outdoors, and examining skulls. A camp speaker is also shown with a possum.

The newsletter is sent to 200 4-H families six to eight times per year. It is also shared with some stakeholders such as County Commissioners.

Jed Dillard

Extension Agent I Livestock/Wildlife
U.F./IFAS.-Extension
Jefferson County/Northwest

The Jefferson Grazing series is an ongoing program for pasture owners in Jefferson County Florida and surrounding counties. Begun in 2013, the series continued through 2014. In addition to classroom presentations, producers are encouraged to bring in unknown or problem plants. A group pasture walk in 2014 allowed producers to learn to identify weeds, clovers and other legumes. The series will restart in 2015 with a grazing variety trial field day.

Each meeting of the series examines a single topic such as Soil Fertility, Weed Management, Hay Production and Usage, etc. The series has attracted producers from five counties

and owners of cattle, horses, sheep and goats. Many of these producers are novice grazers and new to Extension programs and are receiving some of their first technical training about pasture management. "Learning how to make the grass greener on YOUR side of the fence" showed potential attendees owners of all livestock species, and owners with grazing problems were welcome.

This picture was taken as I was driving in for a farm visit, and it was used in the announcement for the program discussing Florida Best Management Practices, one of which is the design of a sustainable grazing program emphasizing rotational grazing. The photo originally was used in the Northwest Florida Ag Newsletter <http://nwdistrict.ifas.ufl.edu/phag/2014/07/11/jefferson-grazing-series-to-focus-on-best-management-practices/> and the online newsletters of the sixteen counties in the district. The photo was also used on flyers distributed in three counties to announce that month's program.

Video Presentation **National Winner**

Parrish, M.J.*¹, Robbins, H.E.*²

¹ Senior Extension Agent, Virginia Cooperative Extension, Dinwiddie, VA, 23841

² Associate 4H Extension Agent, Virginia Cooperative Extension, Dinwiddie, VA, 23841

In 2014 Extension offices across Virginia celebrated the 100 year anniversary of the passage of the Smith Lever Act and beginning of the Extension program. This video concept was developed to highlight Virginia's First Farm Demonstration Program, the "Corn Club," that started in 1909 with boys from Dinwiddie and Chesterfield Counties. The video was used during anniversary receptions, club events, and production meetings to educate our clientele about the early history of Extension in Dinwiddie, Virginia. The video was distributed through thumb drives, DVDs, Facebook and YouTube to clientele, volunteers, Extension Leadership Council members, VCE Agents and Specialists for their use during celebration activities. With the assistance of our Summer Intern and a few of our agriculture volunteers and 4H members, we were able to re-enact the day-to-day activities of the first Corn Club. The filming was done with a Canon Vixia HF R20 High Definition Camera and an Audio Technical ATR6550 Shotgun Microphone with wind/noise cover. The video software was Adobe Premiere Elements 9 operated on a Dell Vostro 360 computer with 4GB of memory. This video is on YouTube at https://www.youtube.com/watch?v=0x7VT2gh_Zc. Alternately, users can word search YouTube with "Dinwiddie Corn Club." As of February 26, 2015 the site had over 261 views. Many views have been for group presentations.

NATIONAL FINALISTS

Peronto, M.*¹

¹ EXTENSION EDUCATOR, Ellsworth, ME, 04605

HOW TO PRUNE A FORSYTHIA

In the spring of 2015, a 4:20 minute instructional video was developed as a tool to help gardeners of all levels learn the basics of pruning forsythias for health and aesthetics. Step-by-step instructions cover proper timing, tools, and specific pruning techniques. Viewers learn why specific pruning steps are recommended and how forsythias respond when pruned. The video was created for three reasons:

1. to respond to the high volume of client inquiries received by county and state Extension staff every spring and summer.
2. to serve as a teaching tool for the Maine Master Gardener Volunteer training, and
3. to be used in a four-part experiential pruning course offered annually in Eastern Maine.

Marjorie Peronto authored the script, narrated, and demonstrated the techniques in the video. Videotaping and editing was done by Patrick Gill, UMaine Extension's Communication Technology Professional. Released three days prior to this submission, the video is now a component of Maine's online Master Gardener reference manual (used in thirteen counties) and is available to the public on UMaine Cooperative Extension's YouTube channel. It is also embedded in Peronto's newly published online fact sheet, Pruning Forsythias in Maine (<http://umaine.edu/publications/2513e/>). Google analytics indicates that in the first three days since its release it has been viewed 36 times, demonstrating the potential of reaching a very large audience over time. The video was first aired on March 6th, 2015.

URL: https://www.youtube.com/watch?v=nR80_eFRqyA&feature=youtu.be

Infante-Casella, M.*¹, Schilling, B.*², Bamka, W.*³, Komar, S.*⁴, Hlubik, W.*⁵

¹ COUNTY AGENT, ASSOCIATE PROFESSOR, RUTGERS NEW JERSEY AGRICULTURAL EXPERIMENT STATION COOPERATIVE EXTENSION, Clayton, NJ, 08312

² Extension Specialist in Agricultural Policy, Rutgers NJAES, New Brunswick, NJ, 08901

³ Agricultural Agent, Rutgers NJAES, Westamton, NJ, 08060

⁴ Agricultural Agent, Rutgers NJAES, Newton, NJ, 07860

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Agritourism is one area where Extension educators have seen an increase in inquiries from farmers and land owners. This growing interest in agritourism represents a new opportunity for Extension to provide educational programming. However, in order for these resources to help farm businesses reach their full potential, they must not only address the educational need, they must be shared in a format that is readily available

for today's technologically savvy farmer. In response to this need, a team of Extension professional's developed an in-depth educational resource specifically for service providers and designed to provide farmers with the most current and useful tools related to their agritourism businesses: <http://agritourism.rutgers.edu/training>. These resources were developed using several media including: slide shows, fact sheets and video presentations focusing on several topics related to risk and liability management. This specific video Managing Risk on Your Farm: General Farm Safety, <https://vimeo.com/75228707>, was written and produced exclusively by Extension personnel and was created to introduce both farmers and visitors to the myriad potential hazards that may exist on agritourism farms. The resources were presented at various trainings with more than 375 participants. The educational site has been visited 41,000 times with 12% of the visitors working for international institutions (website analytics data from 2014). This video has been viewed more than 3,578 times in 2014. Farmers can learn from farmers, and this on-farm video shows safety aspects and prevention methods to keep visitors safe.

Banks, J.E.*¹

¹ Agriculture/4-H Youth Agent, Utah State University, Nephi, UT, 84648

Water conservation is a high priority for people involved with gardening. Drip irrigation is an efficient way to conserve water. In cooperation with local gardeners in Juab County, a simple and cost effective drip irrigation system was designed. The basic system employs PVC pipe and manual ball valves, and can be easily modified to accommodate nearly every type of garden situation including raised beds, greenhouses, fruit trees, and traditional gardens. To educate gardeners about the system, beginning in 2008, a number of different educational materials have been developed. These materials include a four page fact sheet, a 28 minute television program, and a PowerPoint presentation. Since making these materials available to the general public, the author has been contacted by people in 38 states and 7 foreign countries that are using the system. To reach a more diverse audience, it was decided to record an online video. In May 2014, a 9 minute USU YouTube video was recorded and placed online. The video's title is "How to Build a PVC Drip Irrigation System". The purpose of the video was to create a brief and concise recording that would demonstrate the major points of the system. As of March 9, 2015 the video has been viewed over 24,000 times from people in 170 countries with an average viewing time of approximately four minutes. Comments about the video include "Great video, Love the idea, and Jeff Thanks". The video has received 99% likes. The video can be accessed at <http://youtube.com/watch?v=NOpvLFwjS1g>.

Website

National Winner

Infante-Casella, M.*¹, Jack Rabin*², Richard VanVranken*³

¹ COUNTY AGENT, ASSOCIATE PROFESSOR,
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³ Agricultural Agent, Rutgers NJAES Cooperative Extension,
Mays Landing, NJ, 08330

The website and blog titled, Sustaining Farming on the Urban Fringe, <http://sustainable-farming.rutgers.edu/> is a team effort among 2 Rutgers NJAES Cooperative Extension, Agricultural Agents, Michelle Infante-Casella and Richard VanVranken and Jack Rabin, Director of Rutgers Agricultural Research Centers. Michelle Infante-Casella, is also SARE State Coordinator for the Profession Development Program in NJ and utilizes resources from the program to maintain this website and blog. The main audience for the website and blog is farmers. However, data from Google Analytics shows the page views to come from others like agricultural service providers, extension educators, government officials and the general public. From March 1, 2014 until March 1, 2015 there were 22,898 page views, with a 4-year total of 91,445 view since inception. To date there are 115 articles posted related to applied agricultural research and evidence-based topics related to sustainable agriculture. One of the more popular sections on the site is titled “Farm Calls”. These articles deal with day-to-day questions Agricultural Agents receive from farmer clientele. The basis for creating this section of articles is that other farmers may have the same questions and may benefit from the discussions or answers shared by Agricultural Agents. Sustaining Farming on the Urban Fringe, <http://sustainable-farming.rutgers.edu/> is an excellent tool to disseminate extension-based and real-world sustainable agriculture information in the State of New Jersey where agriculture is on the “urban fringe”.

NATIONAL FINALISTS

Peltier, A.*¹

¹ Extension Educator, Commercial Agriculture, University of Illinois Extension, Monmouth, IL, 61462

The Northwestern Illinois Agricultural Research and Demonstration Center is one of six agronomy research centers managed by the University of Illinois’ Department of Crop Sciences. The Commercial Agriculture Educator position was developed during the most recent Extension reorganization. An educator is now stationed at each research center and charged with sharing research results with clientele. Replacing a monthly paper-based newsletter, the “Northwestern Illinois Agricultural R&D Center” website (<http://web.extension.illinois.edu/nwiardc/>) was launched in April 2012 to more

quickly and widely disseminate information to clientele. Throughout the growing season, the Hill and Furrow Blog (<http://web.extension.illinois.edu/nwiardc/eb270/>) houses articles regarding topics that affect row-crop production in Northwestern Illinois. Diverse topics have included research-based information regarding agronomic topics such as: crop rotation, variety selection and planting date; economic topics such as: crop insurance, grain sales and cash rents; pest management topics such as insects and plant disease; and conservation topics such as cover crops, weather, water and nutrient management. This website has also been used to gain insight which topics are of most interest to clientele throughout the growing season, for marketing purposes, and to provide visual aids or more detailed information regarding topics that are presented in regional media markets. Usage of this website has continued to increase yearly, with 30,994 individual page views in 2012, 47,261 in 2013 and 104,845 in 2014. Since November 2014, this website has been among the 10 most frequented of University of Illinois Extension’s “content websites”, responsible for between 2 and 3 percent of the total content website traffic.

Arora, K.*¹

¹ Field Agricultural Engineer, Iowa State University Extension, Nevada, IA, 50201

All stakeholders, nationally, involved in development of corn stover harvest supply chains are the intended audience for this web site. The web site is tentatively tailored towards Iowa conditions. The web site provides an over view of the classification of corn stover based on bale format, harvest logistics, stover quality, soil quality as influenced with stover harvest, nutrient balance in the soil after stover harvest, and the pricing and economics of stover harvest. As the reader reads through these over view topics, the web site guides the reader to 21 different in-depth publications developed as a part of this project. The web site allows the site visitors to ask a question from one of the experts on the team. The web site provides links to the two biggest users of corn stover in Iowa i.e. DuPont-Pioneer and Poet-DSM. The web site has over 3,500 visitors since its launch in April 2014 and has documented over 1,100 downloads of the different publications posted on the web site. As the team coordinator, I am the person solely responsible for content development, web site design, obtaining photographs, responding to questions submitted online, and maintenance of the web site.

<http://www.extension.iastate.edu/stover/>

Leffew, M.B.*¹

¹ Extension Specialist II, University of Tennessee Extension, Spring Hill, TN, 37174

The Agritourism Ideas to Action Website (<https://tiny.utk.edu/IdeastoAction>) is a compilation of resources for farmers interested in developing agritourism operations and farmers already conducting agritourism activities. Resources have been developed or discovered for many aspects of analyzing,

developing and growing agritourism operations. The resources are organized into seven categories with plans to expand to other topics in the future. Current topics include: Understanding Agritourism, Assessing Your Resources, Planning for Success, Understanding the Regulations, Marketing Effectively, Playing It Safe – Safety and Emergency Preparedness and Protecting Your Assets. The specialist is primarily responsible for the design and maintenance of the website. She is responsible for much of the content including introductory text, photos and development of many of the resources listed on the site. The website has been promoted to producers, Extension agents and industry partners at county, regional, multi-state and international educational events. The site has been promoted via email to more than 1,600 agricultural agents and specialists, producers and industry partners and has been promoted via the Center for Profitable Agriculture's Facebook page.



**NACAA Member
Presentations**

2015 NACAA

100th

Annual Meeting

and

Professional Improvement Conference

Sioux Falls, South Dakota

Administrative Skills

FUTURING & VISIONING: A TWO-PART APPROACH TO PLANNING FOR THE FUTURE IN EXTENSION

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² Extension Educator, OSU Extension, Defiance, OH, 43512

As NACAA celebrates a century birthday, Extension agents and educators look proudly at our past and expectantly to the future. Extension educators are often tasked to participate in or lead visioning activities to plan strategies that will meet the current and future needs of clientele and communities. Often these exercises are internally focused, “What is the future we desire to create and how do we strategically plan to get there?” This approach is useful, but it can be made more robust by purposefully considering external factors, trends, and issues that will affect the future. Ohio State University Extension has undertaken a futuring and visioning process to facilitate a Conversation on the Future of Extension.

Participants in this session will learn about the strategic foresight process that OSU Extension is completing, helping to foster a better understanding of the practice and scholarship of futuring. Participants will also learn about the trends and descriptors that have been identified in Ohio and analyzed through OSU Extension’s futuring process. Participants will be engaged in a group activity to identify the most important and uncertain trends and issues that will drive change for our Extension system and society. From this interaction and instruction, participants will gain an understanding of strategies they might use to implement a similar futuring project with the clientele they serve.

PROMOTION COMMITTEES, AN OPPORTUNITY FOR MENTORSHIP

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¹ Extension Educator, Nebraska Extension In Burt County, Tekamah, NE, 68061

Promotion in rank is a significant achievement in any Extension professional’s career, both as recognition of their accomplishments, and financially. Too often, promotion committees are viewed as assuming the role of ancient emperors in issuing a thumbs up or thumbs down verdict on an applicant’s promotion file. In some cases, applicants did not know who served on their promotion committee and received no support and little feedback on why they were or were not supported for promotion.

Nebraska’s Northeast Extension District Promotion Committee agreed to assume a new role, one of mentorship and support. In a district with only 37 educator positions, the committee received 14 promotion files and supported 13 of them for promotion in 2013 and 2014. All 13 files were successful!

The applicant with the file not supported for promotion in 2013 was given the opportunity to rewrite and resubmit her file, but opted to wait and resubmit it in 2014 (successful then).

However, promotion committee members didn’t wait until files were submitted to work with applicants. The committee chair surveyed potential applicants nine months before files were due to determine who planned to apply for promotion that year. Then one or two mentors from the promotion committee were assigned to each potential applicant to work with them, keep them on track, offer suggestions, answer questions and help them organize their thoughts and report the impact of their educational programming. An unexpected benefit has been the creation of a stronger bond between mid-career and senior extension educators.

PEER LEARNING TO STRENGTHEN PROFESSIONAL DEVELOPMENT

*Winter, N.¹

¹ County Extension Educator, University of Minnesota Extension, Hutchinson, MN, 55350

Educators and agents across the country receive varying degrees of professional development. Local Extension Educators in Minnesota receive professional development at the state conference and at two different staff developments. We are also encouraged to seek out additional professional development to strengthen our skills as an Extension Educator. Administration has tried to help us succeed, but many of the new hires and those with experience do not know how to utilize all of the accessible tools available to them. They also don’t know how to navigate through this new position to immediately provide outcomes and impacts to the public. In 2014, I sought approval from my supervisor to facilitate Local Extension Educator peer learning in Minnesota. We meet monthly utilizing video technology to share our knowledge and to help answer questions. This peer learning model has strengthened the knowledge of those participating and also helped with networking around interest areas. Encouraging this type of activity ensures that staff will continually be learning and improving.

THE EXTENSION DOMINO EFFECT – FROM COUNTY PARTNER TO COUNTY CONTRACTOR

*McMoran, D. W.¹; Smith, D. K.²; Gauthier, J. M.³; Stienbarger, D. M.⁴

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⁴ Community & Economic Development Faculty, Washington State University, Vancouver, WA, 98661

County Extension partnership agreements with local governments around the nation have been changing (Lindstrom, 2008). Three of 39 counties in Washington State

recently transitioned to a contract or interagency agreement at counties' request, primarily to reduce or limit County liability. The timeframe allowed by counties to complete the transition varied from three months to nine months. County staff in Extension offices were required to apply for their same jobs under Washington State University (WSU) employment. This study describes the Extension staff's reaction to the process and their concerns over ramifications to their programs. The findings provide guidance on how to preemptively avoid or address potential conflicts that may occur during a transition from county MOA to contractual agreement. WSU Extension survived the great recession, in the process losing over 20% of their staff and faculty from 2008 to 2014. Other changes included elimination of geographical districts in favor of statewide program units and shift to regional programming. As this happened, counties faced unprecedented drops in revenue and forced them to look carefully at ways to save money and reduce liabilities. In the three counties studied, this entailed changing how counties funded Extension. While the ramifications of the move to a vendor type relationship remain to be seen, it would behoove Extension to closely watch and study the outcomes of such changes. How will Extension offices maintain the traditionally close partnerships with counties under this new structure? Will this change impact outreach to local stakeholders? Finally, what will be the longer term impact to faculty and staff required to work under the new system?

Agricultural Economics & Community Development

FARMLAND LEASING PROGRAMMING: BLENDING LEGAL AND ECONOMIC CONTENT TO REACH LANDOWNERS AND TENANT FARMERS

*Hall, P.¹; Ward, B.²

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² Assistant Professor, The Ohio State University, Dept. of Agricultural, Environmental & Development Economics, Columbus, OH, 43210

Faculty from Ohio State University Extension's Agricultural & Resource Law Program and the Department of Agricultural, Environmental and Development Economics at OSU offered Farmland Leasing Workshops in 2014 and 2015. The team planned a multi-disciplinary approach to farmland leasing, combining both legal and economics education, and also designed the workshop for a dual target audience that would include both landowners and tenant operators. Goals of the workshop for economics education were to increase participant understanding of types of farmland leases, economics of crop production, and using data to negotiate a fair market lease arrangement. For legal education, the team aimed to expand participant knowledge of legal requirements for enforceable lease agreements and other current legal issues in farmland leasing, and to prepare participants to develop a written farmland lease agreement. The team utilized case

study problems to illustrate application of information and to engage participants in the learning process. OSU Extension Educators partnered with the team to host workshops in nine locations throughout Ohio. The evaluation instrument for the workshops included a pre/post test of legal and economic knowledge regarding farmland leasing. This presentation will explain the farmland leasing workshop design, including topics addressed and the use of case study application exercises, share workshop evaluation results and offer recommendations for blending economic and legal education for Extension farm management programs.

WEB-BASED TOOLS ENHANCE CROP RISK MANAGEMENT EDUCATION

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¹ Farm & Ag Business Management Specialist, Iowa State University Extension, Altoona, IA, 50009

Over 154,000 Iowa farms with commodity crops were impacted by changes in the Agricultural Act of 2014. Participation in the new 5-year farm program would require more complex decision-making on the part of both landowners and the current producer on those farms. The 3-Step Process: Update, Election and Enrollment provided a chance to update base acres and/or yields by FSA farm number which required the landowners signature. The current producer on the farm could then choose by farm number and potentially commodity crop among Agricultural Risk Coverage (ARC) program (either County or Individual) or the Price Loss Coverage (PLC) program. That election was irrevocable, and would stay with the farm through the 2018 crop year. In the summer of 2015, the current producer could then enroll the farm concurrently for the 2014 and 2015 crop years, but only for the program previously elected.

Iowa State University Extension and Outreach worked closely with the state and county Farm Service Agency (FSA) offices to plan meetings, workshops and seminars. ISU Extension educators conducted more than 200 different face-to-face educational programs with over 15,000 in attendance. Links on ISU Extension web sites had more than 12,000 unique visitors. Videos and webcasts were also recorded to help disseminate this fairly complex farm program information and compliment more traditional methods of face-to-face delivery. As a result, the majority of Iowa's 154,000 farms were able to navigate these decisions and elect and enroll in the new commodity crop farm program.

HELPING FARM FAMILIES PLAN FOR THE UNEXPECTED

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¹ Associate Professor, The Ohio State University, Jefferson, OH, 44047

As farm families plan for the successful transition of their farm to the next generation, one of the critical aspects which families need to plan for are unexpected events. A myriad of events could have an effect on a farm's ability to successfully

transfer to the next generation. These events could include the death or disability of one of the farm operators; a divorce which causes financial hardship on the business or the need for a member of the family to be placed in a nursery home. This presentation will share how OSU Extension is helping farmers identify potential threats to their operations and develop contingency plans. Learn how a planning document was developed to help families make a smooth transition in the event of a death or long term disability.

FARMING: PENCIL TO PLOW

*Flores, J. L.¹

¹ Faculty Extension Assistant, Agriculture And Natural Resources, University Of Maryland Extension, Snow Hill, MD, 21863

Farming: Pencil to Plow is a beginning farmer program designed for aspiring small farmers and those producers interested in diversifying their farm operation. The course is held over eight (8) weeks, meeting one night each week for three hours each night of class. Information is presented by experts in the agriculture field who discuss key business planning topics. Speakers include University of Maryland Extension educators, local agencies and businesses that work with agriculture producers. Topics covered in this course include awareness of regulations, developing a business plan, cash flow statements, understanding customer base, marketing, and the importance of budgeting. Farming interests from participants varied greatly: beekeeping, grain, farm to school, alpacas, hay, livestock, CSA, vegetables, hops, and mushroom production.

Upon completing this program, participants have developed a prepared business plan to be presented to potential lending agencies along with a certificate of completion issued by NxLevel, a nationally recognized entrepreneurship training provider. This Extension program has been recognized by the National Association of County Agriculture Agents (NACAA) in 2014 as a nationally recognized and award winning Extension program. To date, there have been 41 participants. Originally developed as a Maryland Lower Eastern Shore program, Farming Pencil to Plow has reached beginning farmers from eight (8) Maryland counties and three (3) states. Of the participants that have graduated from the program, 87.5% strongly plan to use the knowledge and skills gained in this program to help develop their farming endeavor. \$4900.00 total in grants have been secured from the Eastern Shore Entrepreneurship Center with another \$2000.00 secured from the Beginning Farmer Success program. In addition, \$2250.00 of solicited funds have been received to support the program.

ORGANIZING A FRESH FRUIT AND VEGETABLE PRODUCER COOPERATIVE

*Lantz, W.¹

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Garrett County is rural county with many livestock and dairy farms, however Deep Creek Lake provides a tourism draw

during the summer months. Visitors to the county bring a strong demand for fresh fruits and vegetables. In the fall of 2010, a group of farmers met to explore options for expanding sales of local fresh fruits and vegetables. Tailgate markets in the region have grown significantly but only operate a few days per week. Little infrastructure such as cooling and packing facilities exist in the county. After evaluating many possibilities, the group decided to develop a producer cooperative that would focus sales on local restaurants and grocery stores. The group incorporated as an official agriculture cooperative, Garrett Growers Cooperative. University of Maryland Extension has assisted the cooperative with organizing production, including the use of high tunnels to extend the season to match the seasonal use of Deep Creek Lake from Memorial Day to Labor Day. Branding materials, traceability methods, uniform packaging guidelines and the use of returnable containers have been developed. The cooperative also utilizes a system of farm to customer delivery to reduce costs and ensure fresh produce is delivered in a similar fashion as the large fresh fruit and vegetable suppliers. The cooperative has operated for four years, expanding sales to 23 local restaurants, caterers, grocery stores, schools and convenience stores. The cooperative hires a seasonal coordinator and delivery person. In 2014, cooperative sales covered all cost of operation without outside financial assistance.

BUILDING SUCCESS OF FOOD HUBS THROUGH THE COOPERATIVE EXPERIENCE

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Food hubs are viewed as a mechanism to aggregate and market source-identified local foods from small- and mid-sized farms. These products are then distributed through intermediary market channels. Cooperative-structured businesses have performed similar functions for decades. Understanding cooperative experiences and their operations is useful to emerging food hubs in best practices to adopt and pitfalls to be avoided to increase the likelihood of success. A survey was developed to standardize the questions asked of four cooperative board chairmen and Senior level managers from New York State and Pennsylvania. Case studies were constructed to represent the similarities and differences between each cooperative. This presentation will focus on the findings of the survey and suggest strategies for balancing supply and demand, building product quality interacting with buyers, staffing patterns and transportation.

INCREASING LOCAL FOOD AWARENESS IN YOUR COMMUNITY

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UGA Extension Carroll County collaborated with the local hospital system to increase more local food awareness in the community through a variety of efforts. A Farm to Chef

Networking day was held to bring food producers and chefs together to discuss streamlining food distribution networks. Joint marketing efforts were created through a local farm guide and a farmers' market listing. Both pieces created awareness of farms and their products available to the community. By providing local food in restaurants, schools, and institutions, the general public will be made more aware of the importance of healthy food choices and where they can find it locally grown. The networking and marketing efforts broke down any perceived barriers and increased the opportunity for locally sourced food in the community.

POLK COUNTY FAIR AND RODEO ASSOCIATION LEADERSHIP DEVELOPMENT

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One obstacle a county fair faces is the continuity of leadership when no succession planning has been made. The Polk County (Arkansas) Fair and Rodeo Association needed to replace the president as well as needing new board members. The local agent and current board members thought this would be an excellent opportunity to conduct leadership training. To determine needs, a written and oral needs assessment was conducted by the agent. The target audience was current Board members, anyone interested in becoming a Board member and anyone interested in the Association. The results of the need assessments were reviewed, combined, ranked and grouped into categories. Based on the results, a six session leadership program was developed to address the primary objectives which were: develop continuing leadership for filling vacancies; understanding what the duties and responsibilities of an effective Board member were; understanding personalities so they could work with each other better; having a better relationship with the public and media; and develop a strategic plan. Results of the training were: 38 people attended the training and learned new leadership skills; five new Board members were elected from those attending; a new leadership team elected for the executive board; better public relations with the public and media; 30 new volunteers were recruited; a new policy regarding financial donations was implemented for the Association; and a public assessment was completed by 600 fair attendees that was used in developing and implementing a strategic plan.

NATURALLY ESCAROSA: PROMOTING ECOTOURISM AND AGRITOURISM IN NORTHWEST FLORIDA

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Escambia and Santa Rosa counties, located in the northwestern portion of Florida, have had successive setbacks to economic development by hurricanes Ivan and Dennis in 2004-2005, followed by the economic downturn of 2008 and the oil spill of 2010. Local businesses, particularly those catering to vacationers and seasonal residents, suffered considerably due to actual and perceived damage from the oil spill. Extension agents pursued and were awarded a \$171,150 grant from the Gulf Tourism and Seafood Promotional Fund to relaunch "Naturally EscaRosa" (NER). The objective of the NER campaign was to highlight the many agritourism/ecotourism attractions the area offers and to increase visitors and visibility. The grant allowed for expansion of the NER website (<http://www.naturallyescarosa.com>) and brochure, fund printing and redistribution of the brochures, and design promotional banners and billboards, development of a smart phone application. In addition, the grant funded a 2-day conference, permanent marker signs to publicize individuals as part of the larger Naturally EscaRosa trail, printing of the promotional banners and brochures, hospitality industry networking sessions, and equipment for local Extension office use. NER has doubled from 48 locations in 2013 to 101 locations in 2014. The conference reached 75 people; a post-conference survey showed there was a 50% increase in knowledge of agritourism, ecotourism, and marketing campaigns. Twenty-four percent (24%) of these entrepreneurs have implemented marketing techniques learned at the conference. Website traffic has increased 62% when compared to the same time frame the year before. The program is being used as a model for statewide expansion.

CREATING SIGNAGE THAT SELLS: TIPS FOR DIRECT FARM MARKETERS AND AGRITOURISM OPERATORS

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Signage is an important marketing tool that can help farmers market products and services directly to consumers. Signage can be used by direct farm marketers and agritourism operators to provide directions to visitors, encourage farm safety, promote product purchases and add value to the farm experience. This presentation will provide information to help Extension agents teach, guide or assist direct farm marketers and agritourism operators in the effective use and development of signs. Colors, font sizes and styles, number of words viewers are able to read at distance and speed, sign placement and other design considerations will be discussed. Ideas for uses of signs and examples will also be shared.

GRILL IT UP - BEEF; CONSUMER OPTIONS AS BEEF PRICES INCREASE

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Grill it Up! – Beef was a cooperative effort between an Agriculture Agent and a Family and Consumer Science Agent. The objective of the program was to provide attendees with the necessary information to enjoy beef throughout the summer grilling season without exceeding their food budgets'. The program included a live grilling demonstration, a classroom presentation, and a lengthy question and answer session. Topics included; Beef Industry Update, Grill Selection and Use, Food Safety, Knife Selection and Handling, Bargain Steaks – How to Pick Them & How to Grill Them, and The Economics of Ground Beef – results from applied research conducted by the agents. Surveys were collected from thirty-two individuals following the program, 100% (n=32) were able to list something specific they learned from the program. All survey respondents (n=32) also indicated that they plan to apply at least one technique or strategy they learned in their own home. In addition to the survey data, follow-up conversations with select attendees have provided positive feedback regarding the information presented. This program helped enable consumers to continue grilling beef even though the price had become much higher than they were accustomed. This benefits consumers and the beef industry.

A NEW APPROACH TO BREAK-EVEN ANALYSIS FOR RANCHERS

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The newest tool that I have developed on my Wyoming Ranch Tools website is a break-even analysis tool for cow-calf producers. This break-even tool is uniquely imbedded into a partial budget approach. When cow-calf producers look at changing marketing timing of cattle it is often more complex than at the feedlot level. Most break-even tools are centered around the feeding decision and do not account for the many complexities that go into the decision for cow-calf producers. This tool allows producers to analyze complex changes associated with market timing decisions and provides a break-even selling price. This tool was presented at the Wyoming Stock Growers Progressive Rancher forum as well as three other workshops in Wyoming. Additionally it was presented at six Utah workshops. Total participants at the workshops in 2014 and 2015 was 235. Several producers have already worked with myself using the tool to make more informed market decisions. While others have utilized the tool on the website to make similar decisions.

4-H & Youth

“ONCE UPON A FARM” SPECIAL AG EXHIBIT ... EMPOWERED BY CHILDREN’S MUSEUM

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SITUATION: Today’s U.S. population includes less than two percent who live on farms and less than five percent living on farms in Nebraska. With the average person three generations removed from farming and one of four jobs in Nebraska focusing on agriculture, its extremely important to educate youth about the various aspects of agriculture so they understand how it affects their daily lives as well as the global world. How could we best teach young children about agriculture? PLAY (at a children’s museum)! Play is essential to development because it contributes to the cognitive, physical, social, and emotional well-being of children and youth. Play also offers an ideal opportunity for parents to engage fully with their children. Despite the benefits derived from play for both children and parents, time for free play has been markedly reduced for some children. (“The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bonds” by Kenneth R. Ginsburg, AAP Committee on Communications & Committee on Psychosocial Aspects of Child and Family Health, American Academy of Pediatrics; (2006); www.aap.org/pressroom/playFINAL.pdf)

PROGRAM: The Omaha Children’s Museum – “Once Upon a Farm” special exhibit provided an opportunity for kids to experience farm life in the city! The Omaha Children’s Museum recent special exhibit, “Once Upon a Farm”, offered a variety of fun and interactive activities to help children explore the world of agriculture. In fall of 2012, the core group that included an Extension Educator worked with the Omaha Children’s Museum (OCM) to implement a special exhibit that focused on agriculture. The group met with the OCM several meetings and served as consultants to help develop the strategies to accomplish the first time special exhibit. The Omaha Children Museum had never provided agriculture education with such depth and was utilizing the core group to lead the success. The special exhibit focused on agriculture literacy and was on display from October 17, 2014 - April 12, 2015. The exhibit includes; (1) colorful and informative signs throughout the exhibit; (2) a down-sized pivot irrigation system where kids learned about water and irrigation; (3) a dairy exhibit that included a cow to milk; (4) a grocery store, where kids learned about corn and wheat products and other foods that come from the farm; (5) grain bins, where kids can use the conveyor belt to distribute ‘crops’ into the proper bin; (6) two story worm wall, a popular activity that returned from other special exhibits; (7) a pedal track maze with pedal tractors; and (8) a down-sized combine where kids climbed in and explored what it would be like to drive one. Other fun activities included playing in the crop fields, taking care of baby piglets, grilling out at the Cow Cafe, and broadcasting a forecast at the Weather Station. Outdoor features included a real combine

and real tractor. In addition, the educational center focuses on ag-based, hands-on educational activities. Nebraska Extension Educators were encouraged to take part in education during the special exhibit. The museum serves the greater metro Omaha and focuses on youth ages two to eight years old and their parents. The six-month exhibit had approximately 150,000 visitors. The Extension Educator also worked with museum staff to develop a “4-H Appreciation Day” scheduled during Nebraska 4-H Month (February) and a “Nebraska Extension Appreciation Day” scheduled for the kickoff of National Ag Week. For more information about the “Once Upon a Farm” special exhibit, go to: <http://goo.gl/FSPtZy>

TESTIMONIALS from PARENTS: “My kids love this exhibit! The Children’s Museum always creates wonderful activities where children are actively engaged in play and also learning at the same time!” “My son’s favorite activity is the grain bins, where he uses the conveyor belt to distribute ‘crops’ into the proper bin. He was very curious trying to figure out how it all worked, and was so proud when he did!” “Children love climbing in the 2 story worm wall and driving around the pedal track maze!” “I love how Once Upon a Farm ties to the agricultural foundation of Nebraska and how the Omaha Children’s Museum involves partners from across the community and the state to help create the exhibit.”

PRESENTATION: Session participants will have the opportunity to acquire detailed information about the “Once Upon a Farm” special exhibit and how the Extension Educator was involved with making it happen. Participants will also have an opportunity to have dialog with the Extension Educator on how to work best with their local museum to incorporate agriculture education.

NEBRASKA EXTENSION SPECIAL GARDEN PROJECT

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The Nebraska Extension Special Garden Project originated as a way for youth from across the entire state to gain an interest in gardening, try growing new and unusual vegetables and flowers, obtain the education necessary to be a successful beginning gardener, and learn about the wide range of plant-science related careers. This statewide, hands-on experience allows youth to try growing different plants with their families while gaining life skills.

The project focuses on a different flower or vegetable each year. The plant is selected for a unique characteristic that is slightly different than normal. A four-page educational newsletter covers fun plant facts, history, planting basics, growing methods, plant care, common disease and insect problems, harvest and storage tips, plant science-related careers and county fair exhibiting tips and additional ways youth could exhibit is also included. A paper evaluation/link to an online evaluation accompanied the seeds and newsletter.

Over the past five years the Nebraska Extension Special Garden Project has distributed over 7,265 packets of seeds and educational materials to youth in 85 of the 93 counties across Nebraska. Youth learned important skills and gardening practices including weed identification, irrigation frequency, and insect control. They also planned how they could improve practices the following season including amending the soil and utilizing mulch for weed control.

Whether it is learning how to plant tiny amaranth seeds or how to keep weeds down in the garden, the Nebraska Extension Special Garden Project is teaching youth about gardening, one seed at a time.

“GETTING YOUR SCHOOL GARDEN GROWING”: FULFILLING THE NEED FOR BEGINNER SCHOOL GARDEN EDUCATION THROUGH EXTENSION PROGRAMMING

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School gardening has become very popular as a means to getting youth excited about growing their own food, eating healthy, and appreciating the natural world. Extension Agents and Master Gardeners frequently get called upon to assist schools in starting indoor and/or outdoor gardens. Many teachers have little horticultural and nutrition background in addition to not understanding environmental constraints that need to be factored into school garden planning. In response to an increased need for training, Rutgers Cooperative Extension of Union County in New Jersey developed a beginner school garden conference. This annual conference focuses on basic horticulture, nutrition, and environmental topics necessary for success. The uniqueness of this program is that all Extension departments within the County contribute to the event including 4-H, Family and Community Health Sciences, Agriculture, and Environmental Management. The basic curriculum covers topics needed for getting started such as site considerations, light, soil, irrigation, safe garden practices, youth activities, starting seeds indoors, and garden enhanced nutrition curriculum. Rotating advanced topics are also included. A panel of experienced school gardeners provide information on funding, lessons learned, and getting support from administration. This conference is in its third year and has been attended by 155 school educators, and community and Master Gardeners. Based on retrospective surveys, participants had the greatest increase in knowledge and abilities in the areas of soil testing for lead, container gardening, and growing seeds indoors. Additional curriculum content, lessons learned, and results from follow up surveys 1-2 years post conference will be shared.

PREPARING YOUTH FOR THE SALE OF THEIR MARKET LIVESTOCK PROJECT

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When youth express interest in enrolling in a 4-H market livestock project, leaders and parents must assess the suitability of the project to the child's capabilities, resources, and living situation. They must also determine the youth's capacity to handle the sale of the project animal and ability to handle this perceived loss. Not every youth has the temperament to raise and sell a market animal, nor should they be expected to do so. For youth who enroll in a market livestock project for the first time, it is essential for adults to prepare them for the fate of the project animal. This presentation will include description of the event that inspired the creation of an Extension publication, "Preparing Youth for the Sale of Their Market Livestock Project;" distribution of the publication; and discussion of the publication contents and this important youth development topic.

100,000 SECOND GRADERS AT FARM FIELD DAYS: KEYS TO A SUCCESSFUL URBAN PROGRAM

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Utah State University Extension in Utah County orchestrates eight days of farm visits for second graders that live in a large urban county. Tight organization, multiple partnerships and educational presentations tied to state mandated curriculum objectives provide the foundation for a program that hosts more than 7,000 students and teachers each school year. Our theme is, "Ask me what I learned on the farm today." We engage the County Farm Bureau, nine commodity groups, eight FFA chapters and three government agencies to provide the people power. We utilize advance registration by the schools and precise timing to navigate participants around the farm. After a sheep shearing demonstration to start the program students are guided to 14 learning stations where they spend six minutes at each as they learn important basic concepts about the role of agriculture in their lives. Most of the presentations include connections to identified grade-level curriculum objectives such as preventing disease by healthy eating and different roles played by people in a community. The curriculum connections make it easy for teachers to justify the use of limited dollars for a fun, yet educational field trip. State and local community leaders attend one day to participate with the kids and to have lunch with farmers who get a chance to visit with the leaders about issues of concern. Pre- and post-tests, administered by teachers, have shown a consistent 24% improvement on an ag literacy test. An innovative impact report was produced as a 90-page hardbound illustrated book featuring letters and drawings from the kids as they shared with us what they learned.

TEN YEARS OF FARM SAFETY EDUCATION IN SANPETE COUNTY

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Sanpete County is a small mostly rural county in Central Utah which has a large agriculture industry. Sanpete County boasts the largest turkey production and the most sheep and lambs when compared to the 28 other counties in Utah. Other top commodities produced include cattle, alfalfa hay, and barley. Most of the 901 farms in Sanpete County rely on youth to provide much of the labor for the farm enterprises. Also many more youth live next to, and visit farms on a regular basis due to the rural nature of the county. Agriculture is one of the most dangerous industries in the nation. Injury rates are highest among children under the age of 15 (OSHA Farm Safety Fact Sheet 2005). To reduce the risk of agriculture related injuries and death for youth in Sanpete County a highly interactive hands-on community based farm safety educational course was developed. This course succeeded in 100% graduation rate of 172 youth in 10 years with 100 hours of instruction and 300 volunteer hours of service. Pre/post tests show an increase of 10% knowledge gained and 94% of youth rated the program as good or excellent.

4-H AND F.I.R.S.T. PARTNERSHIP: SYNERGISTIC OPPORTUNITIES SCIENCE EDUCATION

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America faces a future of intense global competition with a shortage of scientists. Only 18% of U.S. high school seniors are proficient in science (NAEP 2005) and five percent of current U.S. college graduates earn science, engineering or technology degrees compared to 66 percent in Japan and 59 percent in China.

To address the national shortage of teens pursuing science majors and careers, 4-H has formed a partnership with F.I.R.S.T. (For Inspiration and Recognition of Science and Technology), to get youth excited about science and engineering careers through robotics. In this project youth are engaged in designing, building and programming a robot to perform specific tasks for regional and state competitions. Youth are paired with mentors who are engineering, graphics and business professionals. High school aged youth participate in F.I.R.S.T. Robotics Competition (FRC) or F.I.R.S.T. Tech Challenge (FTC). Younger youth participate in F.I.R.S.T. Lego League (FLL) using an EV3 Lego Mindstorm robot. To prime the STEM pipeline, youth 8-12 years old are engaged in Summer Robotics Camps. As a result of the 4-H and F.I.R.S.T. partnership, youth are demonstrating teamwork, cooperation, and critical thinking skills. Survey responses indicate that 90% of the youth are interested in careers in engineering or business. Graduated FRC youth are attending college with engineering or technology majors. 4-H and F.I.R.S.T. have created a partnership that will advance science education for youth in America.

Ag Issues & Public Relations

WHAT BRINGS PEOPLE TO LEADERSHIP ROLES: A STUDY OF BEEF INDUSTRY LEADERS

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Leadership and volunteerism have been deeply studied in the literature. However, little research exists studying the role of volunteer peer leaders in non-formalized leadership roles in membership-based organizations. This phenomenological study was designed to explore the experience of beef industry leaders in leadership roles. Twelve active beef industry volunteer leaders active at the state, regional and national level were interviewed and described their experience as leaders. Industry leadership was defined from study themes as a role fulfilled by someone who is willing to serve their industry, with the best of the industry in mind and taking on the responsibility and challenges that come along with making decisions to serve and speak for their peers with integrity. Seven themes identified the central phenomenon of the research study and seven primary traits of beef industry leaders were identified. This study offers significance to the field of leadership; to the beef industry; and to any agricultural organization working with volunteer leaders. This study has the ability to guide the development of future leaders in agriculture.

“IF YOU BUILD IT – THEY WILL COME” THE UNION COUNTY, NJ GREENHOUSE PROJECT

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Rutgers Master Gardeners in Union County NJ maintain a 1.5 acre demonstration garden in a county park. The property once served as the park system nursery and had an old greenhouse. In 2008, a proposal was submitted to a local foundation for funding for a new greenhouse. The local foundation was impressed with the proposal and offered the county a \$10,000 matching grant challenge. The challenge blossomed into a six year \$250,000 project that improved the site with the installation of handicapped parking spaces, walkways, a patio and a 21 by 36 by 8 foot greenhouse. The project was a team effort of Master Gardeners, the County Agricultural Agent, Freeholders (NJ county legislators), the County and Rutgers attorneys, local foundations, the County Engineer, the Rutgers Greenhouse specialist and the County Open Space Trust Fund Administrator. Today the site is used for educational programs for people with disabilities, youth groups and the general public and the production of vegetables for local food pantries.

ON FARM FOOD SAFETY SAMPLING: FOUR YEARS OF RESULTS

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On-farm sampling has been used in New Jersey to evaluate current fresh produce production practices for human pathogen risk potential. Over four hundred samples have been evaluated at 32 farms in New Jersey since 2012. Samples collected include: tomatoes, leafy greens, source water, end of line water, soil, compost, sediment, recirculated hydroponic water and product contact surfaces. Samples were evaluated for one or more of the following: generic E. coli, salmonella, ATP and total coliform. No pathogenic E. coli was found in any of the New Jersey samples.

Sampling results show the most predominant risks involve overhead application of surface irrigation water, domestic and wild animal intrusions, and un-composted animal manures. Results have also shown that there is a need for worker health and hygiene training for all persons working at the farm. Worker training should include standard operating procedures for farm activities that have a high risk for product contamination.

The farm sampling results are used to educate growers, Extension personnel and policy makers. Sampling results are a key component when developing farm food safety training presentations and materials. During the growing season sampling results are used in creating timely blog posts on the Rutgers Plant and Pest Advisory and when evaluating future sampling projects. Results have been submitted to the FDA during the comment period for the Food Safety Modernization Act Proposed Produce Rule in an effort to inform the FDA about the proposed composting regulations and actual farm data.

ADDRESSING FOOD INSECURITY THROUGH A VOLUNTEER BASED FARM GLEANING PROGRAM

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Food pantries and soup kitchens in Maine are experiencing a significant increase in demand for their services, while state and local funds to support them have drastically diminished. These emergency food distribution sites are able to purchase discounted nonperishable food items from large-scale distribution centers such as Good Shepherd Food Bank, but can rarely find quality, affordable fresh fruits and vegetables for their clients. Access to healthy food is a basic human right. UMaine Cooperative Extension partnered with Healthy Acadia to create a volunteer-based gleaning program that connects emergency food distribution sites with local farms to obtain low cost or free produce. What started with a simple

apple harvesting event on the coast or Maine evolved over the span of three years into a region-wide food recovery program with 100 volunteers, linking 21 farms with 19 food pantries and soup kitchens, and making 40,000 pounds of free fresh produce available to people in need. Learn about the broad array of volunteer opportunities created by this program, how it benefits the farmers, and the valuable lessons we learned when coordinating the different program partners and volunteers.

UNDERSTANDING THE ROLE OF EXTENSION IN DISASTER 2015+

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The role of Cooperative Extension educators has always involved helping communities deal with crucial issues. This role becomes extremely acute when communities are dealing with the impacts of disasters of all kinds. Historically the role of «County Agents» was a default within communities and understood by staff and citizens alike. As other agencies were developed over the last 100 years the role of Extension in disasters fell back to one of educational preparedness and recovery. This presentation will address the current (often unknown) role assigned to Extension, the resources available to Extension staff from the Extension Disaster Education Network, some surprising language included in Local Emergency Operations Plans which commit Extension, and a set of realities and factors that new and established Extension staff should understand and be prepared for while working within communities. While numerous institutions and Extension staff are engaged in disaster education, all should know that despite your area of focus - disaster work is probably hidden within your job responsibilities. The presentation will provide some of the disaster accomplishments and challenges.

BUILDING A SUSTAINABLE AG WEEK CELEBRATION

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Lemhi, Custer and Butte Counties, Idaho are all considered rural counties. Even though these are classified as “rural” by population, agriculture is not the top employer. There are more youth living in “town” and most residents have limited exposure to agriculture today.

The first Ag Week Celebration was held in 2009. Week started with a few school presentations in each county and a free drive-thru breakfast and a budget under \$1,200. Financial support included donations from private individuals and agriculture related organizations. As all good extension programs do, Ag Week grew into a program

that now reaches each youth in each school in each county. It also includes community awareness programs including social media, radio spots and an agriculture tour. There are now over 25 organizations partnering on ag week and a budget of over \$7,000. Partners not only provide money, they also provide help! They assist with the planning, teaching workshops, recruiting speakers and help with community awareness.

The largest community activity is the free drive-thru breakfast. Hot beef sausage breakfast burritos are served along with milk sometimes string cheese, yogurt, or apples. Each participant also receives a bag full on educational information about agriculture in Idaho and free gift.

Agronomy & Pest Management

A KEY TO PROFIT: UNLOCKING HAY TEST RESULTS

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The cost associated with keeping a cow is considerably more than many producers realize—and the biggest single contributor to that cost is the feed bill. One powerful way to control the costs associated with feeding the cow herd is to test hay and supplement only as needed. Hay testing provides valuable information such as the percent energy, percent protein, and percent Neutral Detergent Fiber of the hay, but understanding the role of Neutral Detergent Fiber in nutrient delivery is key. This presentation explains these concepts through demonstrations such as As-Fed vs. Dry Matter, % NDF prediction of animal intake, and fiber types/relative digestibility. With this new understanding of the hay test, producers are equipped to determine the daily nutrients provided in the hay, supplement only what is lacking and only when necessary, and as a result decrease input costs.

FOUR COUNTY BEEF CATTLE AND FORAGE BUS TOUR

*[Griffin, D. J.](#)¹; [Mobley, M.](#)²

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In 2012, livestock producers in north central Arkansas endured one of the worst droughts in history. Producers needed ideas for renovating pastures and reestablishing their cowherds in 2013. Agents in Cleburne, Faulkner, Stone, and Van Buren counties worked together to conduct an out of state Beef Cattle & Forage Tour for producers. A second tour was conducted in 2014 due to ideas for topics spurred by 2013 tour stops, specifically the possibility of touring a beef cattle processing plant in the Kansas area. On these tours, producers were able to gain knowledge of cattle genetics, 3 different University research programs in Animal Science &

Forages, beef cattle marketing, purebred beef cattle industry, the cattle feeding industry, and beef cattle processing and product marketing. These tours allowed producers to see different segments of the cattle industry and forage research practices that they may only have been able to read about or see at educational meetings. We preach “learn by doing” to our youth but sometimes forget that concept to with adults. These tours allowed producers first hand contact with ideas and methods that could assist them in improving their operations and making them more profitable and efficient. From the 2014 tour, 33% of the 27 producers attending reported that their operations would be impacted from a range of \$1000 to \$10,000 in improvements.

NITROGEN RATE AND PLACEMENT FOR LIQUID STARTER FERTILIZERS IN CORN

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Producers have been using starter fertilizers in corn to become more sustainable in their nutrient management programs. Often they have questions on which is better, pop-up or 2 x 2, and which nutrient component is most important for yield. To address these questions, a one year liquid corn starter study was completed on the OARDC Northwest Agriculture Research Station near Custar, OH in 2014. The study compared 28-0-0, 10-34-0, and ammonium thiosulfate at a 10 and 30 pound nitrogen rate in a pop-up and 2 x2 placement. The 2 x 2 placement had larger yields than pop-up. Yields were similar between the two rates, but populations were significantly less in some comparisons for the pop-up placement. Yields were not increased by the phosphorus component from 10-34-0 or the sulfur component from ammonium thiosulfate. Starter fertilizer did not increase yields by itself, but the starter fertilizer associated with a split nitrogen application, starter plus sidedress, yielded more than a single application of nitrogen at planting.

MID-SEASON NITROGEN APPLICATION ON NITROGEN DEFICIENT CORN

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It is important to use and apply nitrogen (N) as efficiently as possible. N can be lost from corn fields resulting in corn showing significant N deficiencies in the growing season. On-farm research was conducted in 2013 and 2014 to test the feasibility of mid-season N application (VT-R1) in Nemaha County, Nebraska.

In 2013 nitrogen was applied at the rates of 0, 50, 75

and 100 lbs N/ac at VT to the N deficient corn field. Nitrogen was hand-applied to small plots in dry form as urea (46-0-0). This method simulated nitrogen being top-dressed with a high clearance ground applicator or through aerial application. The experiment was designed as a small randomized research plot, with 4 replications.

Results of this experiment showed a significant increase in yield when N was applied mid-season to the nitrogen deficient corn. Corn yields were 75, 105, 106 and 123 bu/ac for the 0, 50, 75 and 100 lbs of N side-dressed treatments respectfully. This resulted in net returns of 0, \$113, \$106 and \$172/ac for these respective treatments.

This experiment was repeated at two locations in 2014. N was applied at R1 stage. A combined statistical analysis indicated a significant yield increase at the 100 lb N/ac rate, compared to the 0 lb N/ac treatment. Corn yields were 88, 99, 104 and 115 bu/ac for the 0, 50, 75 and 100 lbs of N side-dressed treatments respectfully. Higher fertilizer prices and lower corn prices resulted in lower returns for mid-season N application in 2014.

SOYBEAN SEED TREATMENTS: WHICH ARE MOST LIKELY TO PAY AND WHEN?

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Between 2008 and 2013, average soybean prices ranged from between \$2.70 and \$6.36 higher than in the previous 5-year period. During this period of wide profit margins, the practice of “insurance pest management” became more prevalent. Rather than practicing principles of integrated pest management by applying pesticides only to protect plants from known pest or pathogen threats, it became commonplace for some soybean producers to routinely apply pesticides as a matter of practice. This was viewed as cheap insurance of a high value crop. The drop in grain prices beginning in 2014 and projected for the next few years has resulted in a drastic reduction in net farm income. This is forcing farmers to more closely examine input costs and potential return on investment. This presentation will provide an overview of the seed treatments that are labeled and available for soybean, and what research over the past 10 years in Illinois can tell us about which are most likely to pay and when.

SOYBEAN BIOSTIMULANT SEED TREATMENTS - WHAT HAVE WE LEARNED?

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A number of biostimulant seed treatments exist for soybeans, with a wide range of claims accompanying marketing materials. The effects of several biostimulant seed treatments on root growth, nodule numbers/plant and average nodule weight were documented in one field, with statistical differences noted

when product classes were utilized for comparisons rather than individual products. In Nebraska, Optimize and BioForge were evaluated multiple years in large plot replicated field trials, with additional products tested less robustly. Average yield increase for Optimize and BioForge was approximately 1.6 bushels/acre (range of 0.3-2.8) under rain-fed conditions. Usage of biostimulant seed treatments in irrigated production systems, while not as robustly evaluated, have thus far resulted in less yield increase than those noted from rain-fed soybean field conditions.

EDUCATING FARMERS ABOUT INVASIVE SPECIES IN PESTICIDE TRAINING WORKSHOPS

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There is a growing number of invasive species in Minnesota. These invasive species (insects, plants, etc.) are found in all landscapes including our rural and agricultural areas. In an effort to educate farmers about important invasive species which can affect farmer's income and environment, it was determined to conduct a short presentation during the private pesticide applicator workshops for farmers. Private pesticide applicator workshops are held in the winter months throughout the agricultural regions of Minnesota. These meetings give an update of new pesticide regulations, safety practices and pesticides. The workshops are required to update individual farmer's license to apply pesticides and are well attended. We focused on four invasive species affecting rural areas: Emerald Ash Borer (affecting Ash trees in windbreaks, rural communities and widely planted in farming regions), Brown Marmorated Stink Bug (affecting over 300 plants including apple trees, grapes, corn and soybeans) Buckthorn (a small tree which is host to the over wintering soybean aphid and found in windbreaks and woodlands throughout the state) and Oriental Bittersweet (an extremely invasive perennial vine which changes the understory of windbreaks and woodlands). Workshop topics included history, life cycle, identification, damage and control. Free ID cards and handouts were available for participants. A similar presentation was added to the Ag Professional pesticide trainings held in MN. Over 1,184 farmers and commercial pesticide applicators were presented this lesson in 2014. A review of this educational program including topics and evaluations has been documented. This program can be replicated in other states.

EVALUATING THE OPTIONS OF SELECTING OR NOT SELECTING GENETICALLY ENGINEERED (TRAITED) CORN HYBRIDS

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Corn grain prices were high for several years making it easy to invest in multiple inputs that might or might not have been necessary for corn production with minimal concern for costs. However with the recent fall of corn grain prices without much of any reductions in the costs of inputs, producers are looking for areas where costs can be cut. One of the options to cut costs is to drop genetically engineered (GE) corn hybrids. GE corn hybrids provide herbicide resistance and above ground and below ground insect resistance in various combinations depending on the seed company and its hybrids. These traits have provided opportunities to change management programs, but have also already shown the development of failures through resistance in the pests. This presentation looks at the impacts of choosing to use or not use GE corn hybrids in corn production systems based on field observations.

HELPING SMALL FARMS IMPLEMENT NUTRIENT MANAGEMENT IN THE NEW YORK CITY WATERSHED

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The New York City Watershed Agricultural Program (NYCWAP) engages 335 farms (over 92% of all farms in this watershed) in a voluntary program to implement whole farm environmental plans in the 1,500 square mile Catskill/Delaware Watershed. Spanning parts of five counties, it supplies pristine drinking water to nine million people in one of the largest unfiltered drinking water systems in the world. Participating farms are a mix of family run small to very small dairy and livestock farms, all well below the federal Concentrated Feed Operation (CAFO) threshold. The NYCWAP implements manure nutrient management plans (NMPs) with 250 of these farms according to the USDA NRCS 590 Nutrient Management standard. The NYCWAP takes a multi-pronged approach in helping these farms implement their plans by 1) creating easily understood NMPs that are summarized on GIS-based manure spreading maps, 2) providing nutrient management education through farmer workshops and field research/demonstration trials, and 3) providing financial incentives for a subset of farms that annually submit manure application records for review and certification. Two new initiatives include implementing feed nutrient management on dairy farms, and a simple nutrient management plan format for very small livestock farms. The simple plan provides specific nutrient management guidelines, basic nutrient management requirements, and an introduction to relevant crop production techniques, all in an appropriate and understandable style.

CORNELL UNIVERSITY COOPERATIVE EXTENSION / SCHOOL RESEARCH PARTNERSHIP

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Seventy-eight students, so far, in grades seven through twelve have participated in field crop research through the Cornell Cooperative Extension / School Research Partnership. Research projects have focused on corn seedling insects and their control with predatory nematodes. Students have conducted lab bioassays; sampled white grubs in the field; and infested plots with black cutworm and collected data on injury. The students not only get a real research experience, but have actual data to write research reports. This applied research will be used by Extension for farmer education programs. This Partnership addresses several priorities of student education and Extension. It teaches students how to do research by engaging them in STEM (science, technology, engineering, and math). Youth are exposed to agriculture and the potential career opportunities for them. The capacity of Extension Educators to do applied research is increased by having student help. Farmers benefit from the local research conducted. Developing an Extension / School Research Partnership also increases the avenues to pursue grants, because the purpose of the grant includes giving students an educational experience. To facilitate the development of more Extension / School Research Partnerships by other Extension Educators, a four-class curriculum has been developed. It includes PowerPoint presentations to teach principles, classroom activities to illustrate principles, pre- and post-tests for evaluation, student assignments, and an outline to effectively organize a farm field day to show students the impact of research on the agricultural industry and on the farmer personally.

UNDERSTANDING SOYBEAN MATURITY GROUPS AND CHOOSING WISELY

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Soybeans mature based on night time length and not growing degree days like corn. This is not well understood by many producers. Planting takes place over a large window of time in the mid atlantic and southern states. A study was conducted in Maryland to determine the highest yielding maturity group in Maryland under optimum conditions. While we can produce group 2-5's, the early 3's consistently produce the highest yield. The presentation explains how soybeans mature and results of the research in Maryland.

NO-TILLAGE PASTURE RENOVATION SEEDING DEMONSTRATION AND COOL SEASON FORAGE VARIETY EVALUATION

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Successful pasture management requires periodic renovation seeding to eliminate weeds and undesirable forages, especially necessary for the satisfactory removal of endophyte infected tall fescue. In May 2012, a no-tillage pasture renovation seeding demonstration was initiated in a neglected and weedy tall fescue pasture area at the University of Maryland Central

Maryland Research and Education Center, Upper Marlboro Facility. The plot area was sprayed with Roundup and no-till drilled into German foxtail millet, to begin the process of fully eliminating the tall fescue and weeds. During the summer renovation period soil fertility and pest management of the site were addressed, in preparation for a fall cool season forage variety evaluation. Twelve forage variety mixtures, with four randomized replications were seeded in early September, utilizing a "Billy Goat" small plot over-seeder. The seed mixtures contained proprietary forage entries from Pennington Seed and Kings Agri-Seed of orchardgrass, novel endophyte tall fescue, Timothy, Kentucky bluegrass, bromegrass, white and red clover varieties. In 2013 and 2014, visual assessments were made of establishment, quality and yield in a simulated grazing harvest schedule. Experimental results were shared at grower research twilights, meetings and are available online at the Anne Arundel Extension website: <http://extension.umd.edu/anne-arundel-county>

ON-FARM PRODUCTION AND UTILIZATION OF MYCORRHIZAL FUNGUS INOCULUM

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Arbuscular mycorrhizal fungi are naturally occurring soil fungi that form a symbiosis with the roots of most crop plants. Among the benefits plants receive from the symbiosis are enhanced nutrient uptake, water relations, and disease resistance. Farmers can better take advantage of the symbiosis either by adopting management practices that enhance the native population of AM fungi in their soils or by inoculating with AM fungi. The latter option is available to vegetable growers who grow their own seedlings for outplanting to the field. Though inocula are available commercially, inoculum of introduced or indigenous AM fungi also can be produced on-farm using compost and vermiculite as growth media and bahiagrass (*Paspalum notatum* Flugge) as the plant host. Inocula are produced during one growing season and overwinter outdoors. The compost and vermiculite mixture is recovered the subsequent spring and mixed into horticultural potting media for the production of plants colonized by AM fungi. Ensuring colonization requires reduction in P availability in fertility regimes. Outplanted seedlings have the advantage of a pre-established symbiosis over uncolonized seedlings which must await colonization by the indigenous field population of AM fungi. This procedure has been shown to increase the yield of bell pepper, leek, potato, sweet potato, and strawberry.

MEASURING SOIL QUALITY ON THE OLD ROTATION

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Alabama's "Old Rotation" experiment (circa 1896) is the oldest, continuous cotton study in the world and one of the oldest studies in the United States involving cover crops. Data from the Old Rotation has been important in efforts to develop a soil quality index (SQI) to help Alabama farmers measure soil quality/soil health and to implement best management practices to improve soil health. Data will be presented from the Old Rotation relating soil organic matter, soil aggregate stability, soil respiration, soil compaction and other measurable factors to factors used in the new Alabama SQI which will be available to Alabama farmers for the first time in 2015. The new SQI will be introduced along with interpretation based on existing USDA-NRCS best management practices.

UTILIZING LOCAL RESEARCH TO ENHANCE SOILBORNE DISEASE CONTROL STRATEGIES IN SOUTHEAST GEORGIA

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Farmers in southeastern Georgia face conditions common to the upper Coastal Plain coupled with historic peanut-soybean crop rotations that create disease problems distinct from other areas of the state. Peanuts produced here experience severe outbreaks of southern stem rot and *Cylindrocladium* black rot (CBR). In 2014, field studies were initiated to evaluate effectiveness of 11 fungicide programs for management of diseases of peanut. Research was conducted at the Southeast Georgia Research and Education Center in Midville. The experimental design was a randomized complete block with 6 replications. Peanut, 'Georgia-06G', was planted on May 12 and inverted on Oct 9. Fungicides included Bravo, Muscle ADV, Fontelis, Elatus, Abound + Alto, Priaxor, Convoy, Provost and Proline. Treatments were applied using CO₂-powered backpack and tractor-mounted sprayers. Severities of leaf spot, stem rot and CBR were low in this trial, likely as a result of drought conditions during the season. Severity of stem rot was generally less than 3 hits/plot; severity of CBR was typically less than 6 hits/plot. The highest yielding treatment included Priaxor and it bested the Proline/Provost program by 873 lbs/A with an adjusted increased net revenue of \$179/A. In this study, 10 fungicide programs produced a positive return on investment despite low disease. Such information is helpful to growers in southeastern Georgia as they work to improve management of peanut diseases.

SESAME PRODUCTION IN FLORIDA

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In the U.S., sesame has traditionally been grown in Texas, Oklahoma, Kansas and Arkansas. It is marketed exclusively through the SESACO Corporation out of Hobart, Oklahoma. Breeders at SESACO have developed the only non-shattering sesame varieties in the world that allow for sesame to be mechanically harvested. Even today, 99% of the sesame grown in the world is harvested manually, because traditional sesame capsules shatter during the drying stage before harvest. In the last five years, SESACO has explored other production regions, including Florida. Sesame offers benefits such as low water requirements, nematode resistance, pollinator diversity, and the potential to be an economically beneficial rotational crop in North Florida, where crop options are sometimes limited. After seeing the potential of the crop in UF/IFAS research trials since 2011, producers in the Suwannee Valley began growing sesame in 2013, with commercial acreage reaching nearly 6,000 acres by 35 producers in 2014. The annual trials have helped Extension agents and growers become familiar with different sesame varieties, planting configurations, irrigation, nutrient management and weed control. A total of six workshops were conducted to discuss crop management and research findings in 2013 and 2014. Fields were checked regularly to assess the crop and production records have been analyzed after each season. Yields have been variable across north Florida due in part to disease and weather. Nonetheless, 35% of the 3.5 million pounds of sesame produced was rated excellent in quality and yields in 2014.

2-YEAR EVALUATION OF SELECTED PUMPKIN VARIETIES IN NORTHERN UTAH

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Local growers often request assistance in choosing appropriate cultivars. We grew newer pumpkin cultivars commonly recommended by seed distributors, to gauge marketable yield, color, stem strength, size and shape. The purpose of this study was to identify solid performing cultivars that could support the grower's decisions for the best pumpkins for their market. A unique aspect to this trial is that we had a reputable cooperating grower maintain the pumpkins according to their established methods to make the data more valid for other

growers. First-year data was reported previously. In the second year 10 promising cultivars from the previous year were planted for further evaluation (Camaro, Challenger, Corvette, Cougar, Howden, Magic Lantern, Magician, Mustang, Racer, Summit). Three mini-pumpkin cultivars not previously planted were included at the request of Hollar Seeds Company (Half-Pint, Jack-Be-Little, Jill-Be-Little). A randomized complete block design was used. Plants were placed on 8-foot centers. Unknown to us was the fact that the grower changed irrigation practices from overhead irrigation to drip-tape without plastic mulch in year two. Pumpkin yields were estimated to be one-third to one-half of year one yields due to the irrigation change. We observed at least a 25% reduction in the number of fruits per plant and fruit size. Of the cultivars, Challenger was the standout performer in tons/acre for both years. Even though yield was reduced, Magician and Magic Lantern produced consistent sized fruit compared to year one. Of the mini-pumpkin cultivars, Half-Pint produced the most fruit per plant at forty-three.

SEED APPLIED INSECTICIDES FOR WIREWORM CONTROL IN CEREAL GRAINS

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Wireworm (*Limonius* spp.) populations and crop damage increased in cereal grain (wheat: *Triticum aestivum* L. and barley: *Hordeum vulgare* L.) production across Eastern Washington. Currently thiamethoxam, imidacloprid and clothianidin seed applied neonicotinoid insecticides are commonly used to control wireworms. At the inception of this project these seed applied insecticides were commonly used by farmers across the region at 0.07 g ai/100 kg. This rate, for multiple reasons, is inadequate for effective wireworm control in cereal grain production. In 2008 through 2013 a series of on-farm tests (OFT) were completed at two locations examining increased rates (0, 10, 20, 39 g ai/100 kg) of thiamethoxam seed applied insecticides on grain yield and wireworm populations. In 2014 a series of small research plots were initiated to study increasing rates of thiamethoxam, imidacloprid and clothianidin on both spring wheat and barley under moderate to heavy wireworm pressure. In the OFT near Davenport, yield and economic return over costs was increased 30 and 24 percent with increased insecticide rates. However, wireworm populations were not significantly different among treatments. At the OFT near Wilbur, yield and economic return over costs were increased only four percent and wireworm populations decreased 80 percent with increased insecticide rate. Some of this interaction may be related to the wireworm species present. At Davenport *Limonius californicus* (Mannerheim) is the predominate species and at Wilbur *Limonius infuscatus* (Motschulsky) is the predominate species. In the small plot research, one year of data was inconclusive and further research is being completed.

BIOCHAR SOIL AMENDMENT TO CONSERVE WATER AND ENHANCE VEGETABLE PRODUCTIVITY

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Biochar is a carbon-based product similar to charcoal increasingly produced and marketed as an organic soil amendment. Biochar is created through pyrolysis, superheating organic biomass such as wood in an enclosed environment with limited oxygen to produce bio oils, heat energy, and biochar. As pyrolysis industries grow and expand, there is increasing opportunity to utilize locally produced biochar for its value in sustainable agriculture. In 2014, a greenhouse trial was performed to identify optimal pyrolysis production temperatures and soil application rates to conduct subsequent field studies. Lettuce (Parris Island Cos) was used due to its short growing season and compact size. The lettuce was grown in 3-gallon plastic pots filled with silt loam field soil, and amended with 4-4-4 organic fertilizer and biochar made from Utah-sourced cherry wood. We evaluated three pyrolysis temperatures (375°C, 475°C, and 575°C), three application rates (1%, 2%, and 3% by weight), and two particle sizes. Mean weight (g) of plants was determined in a single harvest nine weeks after seeding. Variation in plant weight within and among treatments was high; likely caused by inconsistent irrigation due to emitter malfunction on several occasions, and defoliation by caterpillars. Lettuce growth was decreased with the addition of biochar in all treatments except 375°C, which is a common short term observation in similar studies. Soil amended with biochar produced at 375°C, pulverized, and applied at the 2% rate produced the largest lettuce. In 2015, we will test biochar for enhancement of tomato and melon growth and yield at four cooperating vegetable farms and evaluate its protection of tomato roots from a common soil disease, phytophthora root rot. We anticipate that biochar amendment will enhance plant growth and yield, and may reduce plant water needs in these longer-term field studies.

USING GROWER FRIENDLY, WEB-BASED MAPPING TO SHARE VEGETABLE SEED FIELD ISOLATIONS WITHIN A GLOBAL AGRICULTURAL COMMUNITY

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Greater emphasis has been placed on the interplay between computerized agricultural mapping and crop production since the integration of GPS/GIS became mainstream in the late 1990's. In addition, interfacing agriculture and the web has provided a new dynamic involving production practices, data management, networking, communication and information gathering. Hybrid seed production requires certain field isolations and/or setbacks to prevent the pollen cross-contamination as a result of bees possibly making multiple field visits. For a number of years, vegetable seed producers in Yuma, Arizona utilized a large paper map of growing regions

to indicate field locations, which were made transparently available to all seed producers. With the onset of web-based mapping, the University of Arizona-Yuma, in collaboration with area vegetable seed producers, utilized the Google Maps Engine Lite mapping website to develop a mapping system which allows for a grower friendly platform to identify field isolations. While not necessarily required, we converted a large flat screen, wall-mounted television into a touch screen using an overlay frame. This allowed the operator to enter map locations, and visually network with other users. The system is flexible enough to allow for the categorization of crops, establishing buffer zones, and entering data through the web at the convenience of cellular phone or desktop computer connections. The resulting maps are made immediately available throughout the globe. This presentation will provide a system overview, and review the necessary technical aspects so that participants can incorporate the scheme into their own research or Cooperative Extension programs.

USING CHLOROPHYLL METER AND TISSUE TESTING TO DETERMINE IN-SEASON NITROGEN NEEDS IN TIMOTHY HAY PRODUCTION

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Timothy hay is the largest grass hay commodity in Washington State and the majority of it is exported to Japan and other countries. Irrigated timothy is grown on an estimated 86,700 acres in Washington, 113,300 acres in Oregon, and 135,900 in California. Very little research work has been done on determining optimum nitrogen rates for this commodity.

We hypothesized nitrogen status of timothy could be assessed in season using a Soil Plant Analysis Development (SPAD) units or leaf samples to determine optimum fertilizer rate and apply nitrogen using fertigation. The SPAD meter measures how much of red light at 650 nm (best absorbed by the chlorophyll molecules) is absorbed by the sample and how much transmission of infrared light at 940 nm, at which no absorption occurs and gives a greenness measurement (SPAD unit). These SPAD units are compared to an over-fertilized strip in the field and relative chlorophyll units (RCM) are calculated (field/over fertilized=RCM) for at least 20 measurements. The objective of the research conducted is to calibrate the SPAD meter and tissue testing for nitrogen in timothy.

Research conducted at a Washington State University Experiment Stations located near Prosser, and Othello, Washington using different nitrogen rates, indicate that both RCM and leaf nitrogen content at two vegetative stages will be useful tools to predict needed in-season nitrogen to maximize yield and profit.

Animal Science

LIVESTOCK AND AGRICULTURAL TOURS: TIPS AND TECHNIQUES FOR SUCCESS

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As an Educator in a county with a strong Livestock Association (n=350), of which have been taking an annual tour for 56 years, it was essential to successfully plan and implement a great tour. Not only are these tours considered the premier event of the year, producers gain a better understanding of agriculture at a local, regional, state, and national levels. They better understand the issues faced by agricultural producers whether they share the same livelihood or have a different profession. This talk will focus on tips and techniques to manage marketing, promotion, registration, budgets, transportation (ground and air), lodging, personality conflicts, tour stops, and more.

Of past tour participants completing an evaluation (n=31) in 2013 and 2014, 65% indicated the tours increased their awareness and understanding of potentially adding another enterprise to their operation for additional income. Ninety percent indicated the tours increased their awareness and understanding of the diversity of agriculture in other areas. When asked if they would implement new agricultural practices based on what was learned from tour stops, 68% of respondents indicated they would.

When asked what the highlight of these tours was, some comments include:

- "I have never seen California and didn't know about the water problems of either California or Western Nebraska."

- "Seeing agriculture in California. Never would have gotten to see California if it wasn't for this group of farmers and feeders."

- "Saw olive tree growers and how olives are processed. Saw how garlic is grown. Saw fig trees."

EFFECTIVE MANAGEMENT OF DIVERSE EMPLOYEES ON DAIRY OPERATIONS

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Managing employees is increasingly the primary role of dairy farm owners. On many operations the workforce includes Hispanic employees. Are there differences in managing Hispanic vs. non-Hispanic employees? What can we learn from interviews with employees about employee management? A project conducted by Durst and Moore on employee management resulted in interviews by a bi-lingual interviewer with 174 employees of 14 dairy farms in four states. Of those interviewed, 56% were Spanish-speaking. Responses were segmented by language to look for similarities and differences. The results provide indications of deficiencies in managing employees on some dairy farms and offers means to improve employee management for all producers. The lessons learned

are applicable not just to dairy operations, but also to many types of employee management situations.

WEST CENTRAL CATTLEMEN'S DAY IMPROVE PROFITABILITY

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Eight hundred twenty-one producers with 1,713,442 acres and 505,338 head of cattle attended the West Central Cattlemen's program since 2010 in west central Nebraska, east central Colorado and Northwest Kansas. Evaluations indicated an average of \$15 per head improvement in profitability with an eighty percent acceptance rate for a total of \$6,064,656 improvement in profitability over five years. This program was started with one location in Nebraska, and has grown to seven locations in two states in 2015.

This program has been offered at 27 different locations, where 83.3% of participants gained moderate to significant knowledge on the topics covered. Some of the management changes were as follows: 1) Shorten the calving season 2) Change heifer development program 3) Use risk management strategies when marketing cattle 4) Change grazing strategies. Participant feedback from the program includes "This program gave us the tools to sustain our operation into the future. Hopefully we can have many more." "Good discussion, I like the interaction." "Very good, practical information. Extension programs like these are one of the few places you can get good, unbiased information that will help your cattle operation."

WARREN COUNTY CALF NETWORK

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Beef cattle production has long been recognized as one of the predominant agricultural commodities in the Glascock/McDuffie/Warren county area of East Central Georgia. Area stocker operators faced serious challenges with the calves used to supply these feeding programs. Treatment of sick calves, weight loss in recovery and death loss combined to cost these stocker operators tremendously. They came to UGA Extension for help. To be successful in a beef stocker operation, a consistent supply of calves is a necessity. A large guaranteed supply of source verified, healthy calves is tough to put together in an area known for a large cattle population that is made up of many small producers with their own programs. The Warren County Calf Network was designed to deal with

these issues. The foundation for this calf network is a written agreement that spells out all the details, breed requirements, conformation requirements, health protocol, age and weight specifications and a pay scale that provides incentives to cow-calf producers to provide what stocker operators require. Stocker operators and cow calf producers have consistently increased profits through participation in this program. Yearly evaluations are completed by all participants. The results are used to tweak the details of the network each year to closer meet the participants' needs. This calf network has been a solid foundation for many other educational programs and cooperative efforts among area beef cattle producers. A training component has been added as a requirement for calf providers. A buying cooperative for herd health products, commodities and farm supplies as well as a replacement heifer program have been by-products of the Warren County Calf Network.

LIVESTOCK EDUCATION USING YOUTUBE

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Livestock production is the largest and highest revenue generating agriculture enterprise in Oklahoma. Providing opportunities for livestock producers to learn sound management practices has become increasingly difficult. Both time constraints of the producers and the ability to find dates and times that work for producers is difficult. One solution to this issue is to use social media as a tool to provide educational opportunities for producers. One such tool is YouTube.

By creating videos and placing them on designated or branded channels on YouTube, extension creates a source for producers to obtain unbiased and research information. These videos can then be viewed at the producer's discretion.

Using YouTube for livestock production videos at OSU started with the creation of an OSU Meat Goat YouTube channel in fall of 2013. Twenty five videos were created and added to YouTube. Response has been over whelming. Since its creation the YouTube channels has had over 290,000 views from producers in 207 countries.

In 2015 OSU will launch the OSU Beef Cattle and Forages YouTube Channel. Plans are to create a multitude of videos covering topics pertaining to all areas of cattle and forage production and management.

By creating these videos we plan to extend the reach of the extension service to more producers throughout Oklahoma. These videos are not meant to replace county educators but expand their audience and bring more attention to the local county extension office. Many of these videos are created using county educators as the principal speaker. YouTube and other social media outlets are tools that extension can use to help their clientele to successful agricultural producers.

TEACHING CATTLE PREGNANCY DIAGNOSIS, A HANDS-ON APPROACH

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Cattle pregnancy diagnosis using blood sample analysis is a technology that is underutilized by cattle producers in NW Florida. A program was developed and implemented with the goal of increasing awareness and utilization of technology. Agents identified a cooperating cattle producer from their county. The agents and the cooperating producers attended a training session at the North Florida Research and Education Center where they received hands-on practice collecting blood samples from cattle. The agents and cooperators then held county level training sessions utilizing the cooperator's cattle for hands-on practice. There were a total of four county level trainings. Sixty-three surveys were collected from cattle producers attending the trainings. Seventy-three percent of respondents (n=45) indicated that prior to attending the training they used no form of pregnancy diagnosis in their operation. Of those 45 respondents 69% (n=31) indicated that they were planning on utilizing a form of pregnancy diagnosis in their operation after attending the training. Prior to the training 27% (n=17) of respondents indicated that they had the knowledge and skills necessary to collect blood samples for pregnancy diagnosis. After the training 88% (n=49) indicated that they were comfortable collecting blood samples for pregnancy diagnosis. The utilization of local cooperators and their facilities combined with the hands-on nature of the trainings made this program successful. The county level trainings made many producers comfortable with the technology and the initial training ensured that there are individuals in each county trained to assist others with the technology.

CFLAG AGENTS & YARBOROUGH RANCHES ON-RANCH EDUCATION – SPRING RANCHERS FORUM

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Agricultural Extension education is under increasing pressure to validate its contributions in an increasing urban setting. However, agriculture is second to tourism as an economic pillar in Central Florida. Forage production accounts 5 million acres of pastureland resulting in the cattle industry as big business. The need for on-ranch education prompted the Central Florida Livestock Agents Group (CFLAG) to develop the Spring Ranchers Forum, a sixteen year annual event resulting in excellent education benefitting Florida's Ranchers. The educational activity includes UF Specialists, County Extension Agents, Allied Industry, Yarbrough Ranch and family, and includes a "Ranch Lunch." Typical topics include body condition scoring (BCS) of horses and cattle, hay selection skills, pasture management, Best Management Practices (BMP's) adoption, local environmental issues, toxic plants, troublesome pasture weeds, bio-weed control, herbicide updates, sprayer calibration, chute side manners, heifer selection, goat hoof trimming and many more to appeal to a diverse audience. Objectives of increased technical knowledge, improved management skills adoption, economic gain, and sharing learned skills are measured by surveying ranchers returning to the forum from the previous year. Participants also learn and appreciate difficulties encountered with various species production. At the 2014 forum, ranchers reported reaching CFLAG goals and having saved \$98,565.00 on the 32 ranchers surveyed from 2013. The estimate for all ranchers who attended in 2013 would be \$443,543.00. Comparing these figures with county and state expenditures for UF Extension faculty, the SRF and the Agriculture Extension Faculty are a wise and profitable investment for public dollars.

THE EAST AFRICAN REFUGEE GOAT PROJECT OF UTAH

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There are approximately 40,000 political and religious refugees from several countries living along Utah's Wasatch Front. For many goat meat was their primary protein source in their native lands. While meat goats are becoming more prevalent in Utah, market demand exceeds supply much of the time. Furthermore, traditional market pathways for goats are often dominated by commercial buyers that make it difficult for the refugees to compete.

Utah State University Extension was approached by the Utah Workforce Services' Office of Refugee Services and Rio Tinto Corporation to develop a goat production program to

help meet the needs of the Burundi, Somali Bantu and Somali Bajuni refugee communities. Rio Tinto proposed to hire refugee herders to conduct prescriptive grazing of several noxious weed species on sensitive ecological sites it owned, and which would otherwise be left untreated with herbicides due to their sensitive nature. An additional benefit would be goat meat for the refugee communities and a possible pathway to fund scholarships for refugee youth to pursue post-high school education.

This presentation will detail the efforts to coordinate community, state, agricultural and corporate partnerships to allow this project to succeed, and how each entity is critical in making the project a success.

IN SEARCH OF THE PERFECT STEAK

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American beef is high quality, but tenderness is a concern. The current focused paradigm of beef quality grading is fat and hair color. The purposes of this ten year project were 1) determine if existing DNA technology could be used at the herd level to rank and select breeding cattle for tenderness and if so 2) scientifically confirm the ability of DNA marker technology, for the 18th chromosome to select for tenderness. The tenderness scale is T-1 to T-10 with T-10 being highest tenderness. Normal American beef ranks T-3 to T-4. While DNA tenderness technology is available, little research existed on inheritance, specificity and accuracy. Using DNA marker technology, I researched bulls and selected semen with high ranking DNA tenderness (T-9, T-10). Heifers were DNA tested and those with high rankings were artificially inseminated. Working with cooperating producers, 350 cows were part of the project. Over several generations, we discovered high tenderness ranking to be infrequent and inherited. A group of feeder cattle were raised on irrigated pasture until 900 pounds, commercially finished and harvested. Identical samples were tested for tenderness using a Warner Bratzler shear force machine. Results showed significant difference (<0.01) in tenderness between normal beef (T-3, 4) and selected tender (T-8, 9, 10) beef. The project showed guaranteed beef tenderness is an inherited trait. The technology is specific, accurate, cost effective and makes a significant difference in beef quality. DNA marker use enhanced beef quality and guaranteed tenderness independent of breed, method of finish or fat in the carcass.

BEEF SYNCHRONIZATION AND ARTIFICIAL INSEMINATION ON A SMALL SCALE

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Artificial insemination (AI) has been available to cattle breeders since the 1930s. The dairy industry was the first to take advantage of the new technology, with beef producers following later. A major detriment to the AI process was the constant need for heat detection. In the 1960s research

with progesterone and prostaglandins began to show that the bovine estrus cycle could be manipulated, making AI a more attractive opportunity for beef cattle raisers. Today synchronization protocols have been developed that enable the breeding and calving period to be contained within a much shorter time phase. For many years small-scale beef producers have not been able to take advantage of synchronization and artificial insemination due to economic restraints such as having a gomer-bull to detect heat in a small bunch of cattle. Now due to innovations in the methods of heat detection the process can be done on a very small scale. Beef Producers can have more control over calving periods and add to the genetic character of their herd in a very few generations. Three separate small herds of cattle have been synchronized and inseminated over a three year period in southeastern Utah and southwestern Colorado. The results clearly show that small beef herds can be synchronized and inseminated economically with a minimum of expense and facilities.

HYDROPONICALLY SPROUTED BARLEY FEED TRIALS ON REPLACEMENT RAMS AND EWES

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This experiment was conducted to evaluate the effect of barley fodder produced by a hydroponic system on the performance of replacement rams and ewes. In a completely block randomized experiment 31 replacement ewes and rams were assigned to one of the two treatments (diets) that were either control (alfalfa hay and corn/ barley grain) or fodder (alfalfa hay, corn/barley grain, and sprouted barley). Rations were balanced in both trials using the Montana State Sheep Ration Balancer. In two separate trials over a 2 year period. Each feed trail lasted 100 days in length. Seed grade barley was grown in a hydroponic chamber with a growth period of 6 days. Body weight gain was not significantly different between the treatments at the (P<0.05) level. Control sheep gained 0.64 pounds per day and the sprouted barley fed sheep gained 0.54 pounds per day, collectively over the two 100 day trails. The fodder animals also consumed more dry matter on a daily basis. From an economical view the control group had an average cost of \$.54 per head per day and the fodder group had an average cost of \$.96 per head per day. Cost per pound of gain for the control group was \$.89/pound gain and for the fodder group was \$1.70/pound gain. These costs showed a significant difference at the (P<0.06) level. These findings suggested that hydroponic fodder had no advantage over alfalfa hay and grain in replacement ewes and rams on average daily gain, while it increased the cost of the total ration.

Climate & Agriculture Sessions

CLIMATE MODIFICATION STRATEGIES IN STRAWBERRY PLASTICULTURE

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Plasticulture strawberry production is becoming more popular as a way for Ohio growers to extend the strawberry harvest and marketing season, thus capturing a greater profit from the demand for local strawberries. One of the main advantages of the system is a potential earlier harvest providing a competitive edge in the market place relative to conventional matted row production systems. Other potential advantages include higher yield and reduced environmental impact from a simpler pest management system, enhance food safety and fruit quality issues and reduced harvest labor costs due to increased harvesting efficiency. Challenges include: lack of experience with the system among growers, Extension personnel and researchers; higher production costs; winter injury susceptibility and a lack of winter protection techniques. Objectives of this research were to investigate potential season extension and winter protection improvements in Ohio plasticulture strawberry production. This winter protection field research study looked at six different floating row cover treatments over four seasons to protect the crop from winter weather extremes and to develop climate decision support based upon growing degree models for farmers can properly manage winter protection techniques. Results of this four year field research study included; total marketable pounds of strawberries harvested ranged from 6,785 to 24,658 pounds per acre among treatments; marketable fruit per plant ranged from 11.6 to 37 fruit per plant among treatments and average fruit weight ranged from .44 to .64 oz. among treatments.

ADAPTING AGRICULTURE PRACTICES TO DEAL WITH EXTREME WEATHER: TOO MUCH WATER OR NOT ENOUGH

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Worldwide, soils have become less resilient, however; improved soil management practices have been shown to increase soil resiliency. Morton et al. (2015) survey of Midwestern farmers found that 75% had higher levels of waterlogged soils, 60% actually increased cropping of highly erodible soils, and 25% had significantly higher soil erosion due to a 37% increase in heavy rains in the last 45 years. Midwestern farmers use

artificial drainage (75% tile), no-till (60%), and cover crops (25%) to deal with wet soils. An Adelaide, Australian trip (annual rainfall 8-15 inches) showed how some farmers are adapting to not enough water. Australian soils have lost over 85% of their original soil organic matter (SOM) levels (virgin soils=8% SOM, conventional =1% SOM) comparable to American soils (60-75% lost SOM, Lal et al., 2011). Australian farmers are burning, baling, or overgrazing their wheat straw residue resulting in less surface residue and soil compaction. Soil temperatures reach 1500 Fahrenheit resulting in high soil water evaporation. These Australian soils lack the ability to absorb rainfall during the wet season resulting in water runoff. Some Australian farmers are using cover crops and advanced no-till farming techniques to double wheat yields (from 45 bu/A to 90+ bu/A) and triple conventional SOM levels. SOM buffers soil temperatures, improves soil structure, increases water infiltration, improves water retention, and stores soil nutrients. A Conservation Technology Information Survey (2014) survey found that cover crops and no-till crop yields increased 5% -10% over conventional fields and increased soil resiliency to extreme weather.

USEFUL TO USABLE: SPLIT NITROGEN DECISION SUPPORT TOOL

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There is a close connection between weather and climate patterns and successful agricultural production. Therefore, incorporating climate information into farm management is likely to reduce the risk of economic losses and increase profitability. While weather and climate information is becoming ever more abundant and accessible, the use of such information in the agricultural community remains limited. Useful to Usable (U2U): Transforming Climate Variability and Change Information for Cereal Crop Producers is a USDA-funded research and extension project focused on improving the use of climate information for agricultural production in the Midwestern United States by developing user-driven decision tools and training resources. The U2U team is a diverse and uniquely qualified group of climatologists, crop modelers, agronomists, and social scientists from 9 Midwestern universities and two NOAA Regional Climate Centers. Together, we strive to help producers make better long-term plans on what, when and where to plant and also how to manage crops for maximum yields and minimum environmental damage.

In 2014, the Corn Split Nitrogen Decision Support Tool was released to the public for use in analyzing the fieldwork ability and economic feasibility of applying split applications of nitrogen to corn, one via pre-plant or at planting, and one via sidedress. The tool allows producers to input variables specific to their individual operation. Using average fieldwork days as reported to the National Agricultural Statistics Service and climatological data over the past 30+ years, the tool then estimates the likelihood of successful sidedress nitrogen application over a producer's farms, equating the

successful application to economic cost or benefit analysis. Usable weather and climate data fuel the decision-making of producers on the adoption of the known nitrogen conservation practice of sidedress application, resulting in a net benefit to the environment and an economic benefit to Midwest farmers.

DYNAMIC OF CLIMATE: CURRICULUM FOR BASIC CLIMATE EDUCATION

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The Dynamics of Climate Toolkit was developed from 2010 to 2013 in a methodical way so as to serve as a professional development curriculum that can serve both all forms of educators. The toolkit includes curriculum for an 8 hour workshop that can be presented anywhere in the nation. The workshop addresses the major misconceptions students and adults hold about climate, global warming and climate change. The workshop activities engage participants in analyzing and interpreting climatic data sets and visualizations. Pedagogically, the workshop promotes active learning and collaboration. The originals for printing the handouts, data sets, activity materials, and assessment instruments are available. The available manual provides an overview of the toolkit, guidelines for conducting effective workshops, and a list of available resources and background readings. Interested individuals are encouraged to peruse the materials at www.purdue.edu/doc.

In addition to providing a brief overview of the available materials, a discussion of the usefulness in teaching basic climate science to agricultural clientele, particular professional service providers in agriculture, is anticipated. The Cooperative Extension System also faces the hurdle of creating curriculum that can be widely utilized by broad audiences, and such conflicts were experienced during the creation of this particular set of materials as well.

AGRITOOLS: A MOBILE AG WEATHER TOOL

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AgriTools is a mobile webpage designed to provide location specific ag weather information in an easy to use format, as well as easy access to tools and apps to aid in agricultural decision making. AgriTools will feature weather data from the Applied Climate Information System (ACIS). Data will include a number of weather variables that are most important to the agricultural industry. The webpage will use a GPS location to interpolate data from the nearest weather stations with the ability to save locations.

Another feature to AgriTools will be the decision-aid tools using climate and weather related variables. An example of this is a quick ET calculator using crop type, crop stage, and the interpolated ET value for the location. This will provide easy access to crop water use, from the field, on your mobile device. More tools will be developed as the webpage progresses.

PEER-TO-PEER LEARNING TO REDUCE THE GAP BETWEEN RESEARCH AND PRACTICE

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The broad goal of this initiative is to convene farmers, Extension professionals, and researchers into an integrated online learning network to exchange experiences and knowledge about cutting edge practices and climate adaptation strategies. The particular emphasis is on conservation farming practices and farming systems which will reduce operational risks, especially uncontrolled risks related to climate and weather. We utilized multiple tiers of engagement with growers, Extension professionals, and researchers. Farmer contributors included row crop producers in north-central Florida's Panhandle and Big Bend area, with expansion into southwest Georgia and southeast Alabama. As part of the core project team, we rely on key partners in UF/IFAS Extension, University of Georgia Extension and Alabama Cooperative Extension Service. Research faculty from these land-grant universities are also involved in this learning network. Additional support is provided by climate scientists including State Climatologists and Agricultural Climatologists. We envisioned the online learning network as both a top-down and bottom up learning tool. Research and Extension can utilize this portal to share current timely updates with farming clientele, and farmers share observations which include problems encountered or solutions they developed. This serves as both a real-time information exchange and database of observations for the growing season. We developed a WordPress based portal identified as www.siftag.org. Users were educated through hands-on workshops to make timely updates from their office or the field.

EXTENSION ATTITUDES AND NEEDS ON CLIMATE AND WEATHER IN KANSAS AND OKLAHOMA

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Growing concern about shifts in climate have prompted more emphasis on climate research and education. As part of a USDA Comprehensive Agriculture Program grant directed to Beef Sustainability, Grazing, and Climate Change, Terrie A. Becerra and Gerad Middendorf developed and conducted a survey of county educators in Kansas and Oklahoma. There were 201 educators that submitted responses to this online survey. While 67% responded that they think the climate is changing, 65% have heard no expressions of concern from

constituents. When asked about their capacity to adequately answer questions about climate change, 64% placed themselves in the none to low capacity. Their responses highlight the need for new materials and educator training on weather and climate that will prepare them to address constituents weather and climate information needs. They noted the need for more information on drought management, dealing with high temperatures, unseasonable weather, and extreme rainfall. To meet extension needs the Grazing CAP has produced one of a series of basic weather and climate fact sheets and a weather training in-service has been held in Oklahoma.

CASE STUDY: RAINFALL TIMING IMPACT ON OKLAHOMA WHEAT PRODUCTION

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In 2014, the Oklahoma statewide hard red winter wheat crop production was the lowest in fifty-seven years, 51 million bushels. Two years earlier, in 2012, the state wide wheat production was 155 million bushels. The primary cause for the disastrous crop in 2014 was the lack of rainfall during the spring growth period. Rainfall for 2014 and 2012 from the Oklahoma Mesonet showed how important rainfall distribution during the spring season is compared to longer term averages. The timing of rainfall during the spring season showed a delay in the western parts of the state, but more typical rainfall timing in eastern Oklahoma locations. This case study shows the importance of monitoring growing season moisture amounts and timing in assessing potential yield. It demonstrates the severity shifts in weather patterns can have on agricultural production.

EMERGENCY LIVESTOCK KIT PRESENTATION

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Three years ago tornadoes swept across Eastern Kentucky, wreaking havoc on homes, businesses and farms. Storms of this magnitude had never happened in this region and farmers were not prepared. Veterinarians had difficulties meeting the needs of all the animal owners. What/How can farmers be prepared for such an emergency? Agricultural Extension Agents in the area put together an Emergency Vet Kit for livestock owners that were presented to producers in the area who experienced loss on their land. People need to be prepared to provide first aid to their animals, avoid dangers to animals from debris, fences may be down, and preparation is the only way to avoid these situations. This session addresses how farmers can prepare their operations for emergency situations. Examples

of these preparations will be discussed and on display during this educational session.

Early Career Development

MAKE A GOOD COUNTY PROGRAM INTO A GOOD NATIONAL PROGRAM WITH PROPER CURRICULUM DEVELOPMENT

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Curriculum is important in Extension programs across the country. It is the way Extension professionals share information in order to repeat successful, high impact programs in other regions and states. The challenges come in ways to package the curriculum and make it available to Extension professionals in a comprehensive manner. Many Extension professionals feel they are creating new and exciting programming, but are not sure how to package that information into curriculum that can be shared and repeated. This program will focus on taking county or multi-county programs to the next level by documenting all portions of the program into a packaged curriculum. Examples will be shared from many programs that went from a great idea in a county to a great idea in several states by following proper steps to get the curriculum packaged.

LIVING THE LIFE OF AN EXTENSION PROFESSIONALS-THE REST OF THE STORY

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Do you ever wish you would known earlier in your career the pitfalls of trying to balance the life of an Extension Professional? Do you want ideas on how to manage your hectic schedule? Do you want help balancing your work life with your home life? Do you wish someone would have given you a the secrets on negotiating paperwork and the promotion & tenure process? If so, this presentation will feature a few “older” professionals who will share their experiences on how to be successful in Extension without burning out. Learn what is working for other professionals and what train wrecks to avoid.

CREATING SUCCESSFUL AWARD APPLICATIONS, AND WHY THEY ARE IMPORTANT

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Awards are not simply the cherry on top of a good Extension program. They can be a powerful tool that illustrates the significant impact of your programs to administration, funding agencies and potential future employers. Awards signify to others that your peers deem your work as necessary, complete

and well executed. The majority of awards require us to provide impact documentation, which is often the most challenging part of the application. Yet, impact documentation is necessary for others to make the differentiation between a poor program and a successful one. This presentation will outline a method for crafting quality award applications by tightly interlocking your objectives with your outcomes in the narrative. You will also learn effective tips for planning Extension programs that will enhance your eligibility for winning awards in the future.

EXPRESS YOURSELF: HOW TO GIVE A PRESENTATION OF A LIFETIME

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Heather Weeks, Pennsylvania, Cumberland. How do we connect with our audiences? The extension system has become increasingly reliant on formal presentations and the use of traditional slideshows for teaching rather than the original non-formal educational strategy of experiential learning. While this makes educators' jobs easier in many ways, it also makes it more difficult to connect with audiences. In order to increase knowledge and practice change, presenters must be relatable and understand the different learning styles of each audience. Speaking to a group of youth livestock exhibitors requires a different approach than speaking to county commissioners. In this presentation techniques for creating stories that can connect with individuals in a classroom setting will be discussed as well as exercises to help tailor presentations to specific audiences. Developing presentation skills can create trusting relationships with clients, inspire youth to learn, encourage and create enthusiasm among coworkers and team members. In a science and agriculture setting, educators often rely on the facts to educate an audience, however scientific jargon can be confusing and facts can lack color or passion that motivates audiences. In the incredibly popular TED (Technology Entertainment Design) talks, presenters follow a strict series of practices that make each presentation undeniably inspirational. Using techniques from Carmine Gallo's Talk Like TED, Acumen's Storytelling for Change, and Chip and Dan Heath's Made To Stick, this workshop will help develop these presentation skills that are invaluable for any extension agent or educator.

PAINLESSLY PUBLISHING IN THE JOURNAL OF THE NACAA

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The Journal of the National Association of County Agricultural Agents is a peer reviewed academic journal recognized by the Library of Congress. The Journal of the NACAA accepts papers involving original/applied research, case studies, reviews and bright ideas. Getting published in a peer reviewed journal is one of the best ways to improve your resume/curriculum vitae. Getting published in a peer reviewed journal is a must for individuals in Extension systems

that require tenure and promotion. This presentation by the Journals editor will teach you how to develop an article idea, how to electronically submit the manuscript and how to navigate the peer review process.

Horticulture & Turfgrass

TEACHING GROWERS ABOUT HERBICIDE DAMAGE IN HORTICULTURAL CROPS

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Unlabeled herbicides can cause significant damage to horticultural crops that are accidentally exposed to them. Traditionally, problems were encountered from off-target drift from nearby fields undergoing herbicide application. Additionally, damage now is being observed from compost and manure that has been contaminated with new-generation herbicides that are labeled for use on pastures and forage crops. These herbicides have the ability to pass through the alimentary canal of farm animals and still remain active. As a result, they still are present in the animal's manure and can cause substantial damage to sensitive crops when the manure is used for soil improvement or as a component of compost. Damage has similarly been observed in soil brought into greenhouses from fields where these herbicides have been applied. Also noted is damage from irrigation water contaminated with herbicides that the growers have used on their own land to control woody species. When growers experience problems with herbicide damage on their crops, we find our time spent identifying what caused the injury, and then educating the growers on how to recognize the damage and avoid it in the future.

TRAINING AND UTILIZING MASTER GARDENER VOLUNTEERS AS TEACHERS IN HORTICULTURAL PROGRAMMING

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The mission of our Master Gardener program is, «We are Ohio State University Extension trained volunteers empowered to educate others with timely research-based gardening information.» Beyond answering questions and coordinating committees to do meaningful work in the community, these volunteers can and do teach great programs to extend the reach of the university's horticultural information. This session will share data from two counties where training has included a required teaching exercise. Through this exercise, a large number of Master Gardener Volunteers report increased confidence in their ability to teach, gained skills in creating presentations and satisfaction from increased programs and activities. Beyond this, these volunteers expanded the number

of programs and the number of participants in horticulture programs in the counties.

INCREASING MASTER GARDENER VOLUNTEER CONFIDENCE IN DIAGNOSING PLANT PROBLEMS

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A 2010 survey of Extension Master Gardeners (Meyer, et al) indicated that their confidence in diagnosing plant problems would increase with further training. With that in mind, Extension staff in Ohio created Diagnostic Workshops for Master Gardener Volunteers.

For the past four years, these workshops have been hosted in at least four different regions of the state. A local county EMG coordinator is responsible for hosting the event. The State Coordinator organizes the workshop and speakers; the program is repeated each location in order to gather data regarding impact.

The format of the workshop is a morning program consisting of topics focused on diagnosing plant problems (IPM, 20 questions to ask, etc.). The afternoon is a hands-on experiential learning activity. There are 30 samples from the landscape that are either for plant identification or insect or disease identification purposes. The EMGs have an opportunity to identify all of the sample questions. The Extension staff then goes through each sample for discussion.

In 2014, the four workshops had a combined 153 participants. All participants indicated an increase in confidence level according to the pre- and post- tests.

GROWING THE OHIO HOPS INDUSTRY THROUGH RESEARCH AND EXTENSION

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The Ohio State University (OSU) hop production team began working to bring commercial hops production back to Ohio in 2013 to capture an estimated \$30 million that is spent by Ohio's 170 craft brewers to import hops. This high value crop, once commonly grown across Ohio, was pushed out by pest and disease pressure in the early 1900's. However, using improved Integrated Pest Management (IPM) tools, OSU is conducting education and research to make hops an economically viable crop again. The authors installed two research and education hop yards at OSU research farms in northern and southern Ohio to conduct field research trials and to train new growers. Research being conducted is evaluating innovative production techniques, insect and disease control methods, harvesting, processing, and marketing techniques that can be adopted by Ohio growers. We have identified key arthropod pests diseases and are developing and testing management strategies. To disseminate our findings and other hop production related information to the public we have used outreach techniques such as: workshops, field days, fact sheets, print media, radio, social networking, websites, bulletins, and an email list. Results of this project include 100 acres of hops are now planted in Ohio as of 2014, an Ohio Hops Growers Association with 65 members has been established and Ohio craft brewers now purchase approximately \$1 million of hops from Ohio growers.

TEACHING INTEGRATED PEST MANAGEMENT AND CROP MANAGEMENT IN MOZAMBIQUE

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The Farmer to Farmer Program of the United States Agency for International Development (USAID) provides opportunities for extension educators to teach agricultural topics in many countries around the world. I had the opportunity to teach IPM and crop management in Mozambique on three separate occasions on volunteer assignments with a USAID contractor (CNFA) in 2012, 2013 and 2015. Mozambique is a former Portuguese colony which is just beginning to recover from a war of independence and a long civil war following independence in the late 20th century. Critical infrastructure such as roads and railroads are lacking in many areas. Also lacking is agricultural infrastructure such as equipment dealers and access to improved seed and pesticides. Much of the planting, weed management and harvest is done by hand, with some use of draft animals and tractors for land preparation. Of particular concern for many farmers is management of pests, both in the field and after harvest. IPM techniques were taught for management of field pests and techniques for management of storage pests without the use of scarce

or unreliable pesticides were introduced to farmers. IPM techniques such as crop rotation and intercropping to increase diversity and enhance beneficial organisms were recommended. Also recommended were basic IPM components such as identification of pests, monitoring, decision making using economic thresholds, record keeping and evaluation. In the area of grain storage pests Purdue Improved Crop Storage (PICS) bags were recommended as a possible alternative to scarce and often ineffective pesticide treatments. Farmers were encouraged to try new pest management and other crop production techniques on a small scale before adopting changes from previous practices for all of their production.

TURNING TRASH INTO TREASURE-LARGE SCALE RECYCLING OF USED POTTING SOIL

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Used potting soil from the environmental horticulture production industry is a problematic waste. In conversations with growers, it is estimated that about 10% of plants with potting soil are culled and disposed of in the industry. These culled plants and soil are typically dumped on site and generally not reused. A Southern SARE On-Farm Grant allowed the testing of different methods over two years to solarize used potting soil for reuse. Solarization is a sustainable, inexpensive, and effective method to reduce pathogens, nematodes and weeds. Plastic thickness, soil depth, and covering configurations were manipulated to generate best outcomes. Successful methods were achieved scaling from a mid-scale (one yd³) to large-scale (3.5 yd³) approach. Highest temperatures in the study reached a maximum of 159 F in the large-scale experiment. Solarization reduced and heat killed nematode populations compared to untreated used soil. Weed seed germination at 14 days was reduced about 91% compared to untreated soil. Chemical and physical parameters of the potting soil were not negatively impacted. A growth study also proved that plant physical attributes were not affected by using solarized soil. As a result solarization proved to be a very inexpensive, sustainable method to recycle soil.

WHAT DO PLANT CONSUMERS REALLY LOOK AT WHEN THEY BUY AN ORNAMENTAL PLANT?

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With more than 70% of all plant purchases made in the retail outlet, plant marketers need to know what captures and holds attention in order to make the sale. Michigan State University researchers and extension educators have partnered with retail garden centers to investigate consumer perceptions using an eye-tracking device. We have observed that consumers

are more likely to buy from more complex displays (with multiple levels or diverse plant types) compared to simple displays (single plant type or one level). We have quantified that higher prices to the left of center are observed faster than lower or moderate prices to the right of center. We have also investigated plant branding and have determined that identical plants, one branded and one generic, are not perceived to be equal in quality.

FUNGI IN THE LANDSCAPE: DANGEROUS, BENEFICIAL OR NON-CONSEQUENTIAL?

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Fungi (e.g. mushrooms, shelf fungi, puffballs, etc.) are very common in home landscapes, yet few homeowners know much about them and/or their significance. Frequently, samples of fungi are brought to Extension for identification and information about them. Misconceptions about fungi abound. Some fear for the safety of their children and pets. Others are concerned for the health of their landscape plants. And others want to eat them. Incorrect methods for identifying edible mushrooms are circulated frequently among untrained naturalists. Identifications made by these methods could have disastrous outcomes. This presentation reviews the general biology of fungi and resources for identification, identifies several common species and their impacts (good, bad or indifferent) in the landscape, and the role of Extension agents in advising homeowners on how to deal with them.

MEADOW FRUIT AND HOPS YARD PRODUCTION FOR SUPPORTING LOCAL FARMERS MARKETS, WINERIES, CIDERIES AND MICROBREWERIES

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Streuobstwiese is an old world method of fruiting and in German means a scattered fruit planting in a meadow. In April 2011, the Southern Maryland Fruit Team established a meadow tree fruit orchard at the University of Maryland Research and Education Center, Upper Marlboro Facility. Twelve varieties of apples, pears, cherries, plums, figs and medlars were planted in a three randomized replications, spaced eighteen feet

between rows by sixteen feet in row. In May 2013, a meadow bush fruit planting was added, which included ten small fruit varieties of blackberries, raspberries, gooseberries, currants and aronia, trellised and spaced twelve feet between rows by a variable two to eight feet in row. In early July 2013, a hops yard was established as portion of the research vineyard with four aromatic hop varieties planted in four randomized replications, on a high sixteen foot trellis, spaced six feet between rows and three feet in row. The meadow fruit and hops yard was established to demonstrate the economic feasibility of a small farm supporting local farmers markets, wineries, cideries and microbreweries. The study was specifically designed to observe the effect of meadow fruiting in the reduction of pests and disease development. Experimental results were shared at grower research twilights, meetings and are available online at the Anne Arundel Extension website: <http://extension.umd.edu/anne-arundel-county>.

**MASTER GARDENERS AND EAT WELL
VOLUNTEERS WORK TOGETHER TO ADDRESS
HUNGER AND POOR NUTRITION AMONG
MAINERS WHO RELY ON EMERGENCY FOOD
ASSISTANCE**

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Maine is the most food insecure state in New England. One in seven Mainers relies on emergency food assistance. Paradoxically, almost two-thirds of adults and more than a quarter of school-aged youth are overweight or obese. When finances are tight, families turn to emergency food distribution sites and purchase inexpensive, less nutritious, calorie rich foods at grocers. Accessing healthy food is especially problematic for the working poor. Over fifteen years, Maines Master Gardener Volunteers have donated 1.6 million pounds of produce to food pantries and soup kitchens for distribution to those in need. Making free produce available has not, however, always meant that it is used. Results from a 2010 survey indicated that some Maine food pantries were unable to distribute all of the donated produce. Reasons included recipients' lack of knowledge about how to use fresh produce, and pantry volunteers who did not have the time or expertise to encourage fresh produce consumption. To help food pantry clients become more comfortable with and motivated to use fresh produce when preparing meals, UMaine Extension piloted the Eat Well Volunteers (EWV) program. EWVs undergo training in basic nutrition, food safety, cooking and preserving fresh produce, and cultural sensitivity. Once trained, EWVs conduct hands-on lessons with emergency food recipients at food pantries. By combining the produce generated by Master Gardener Volunteers with the food preparation lessons offered by EWVs, we are able to equip food pantry clients with the supplies and skills needed to feed their families healthier foods.

**USING SMARTIRRIGATION APPS TO SHOW VALUE
OF EXTENSION TO LOCAL GOVERNMENT**

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Extension needs to show that they have value to local county government who funds much of local extension services. One way that the UF/IFAS Manatee County Extension Service is showing its value is by helping Manatee County save irrigation water on county owned properties. Using the Urban Lawn SmartIrrigation App, property site managers with the help of Extension are setting up the SmartIrrigation App on smart phones and tablets. By programing the soil type and unique zone characteristics like sprinkler type and number of sprinklers in the zone, an irrigation schedule is generated. Extension provides detailed zone information to the site managers for app set up as well as completing a full irrigation evaluation on the site to correct inefficiencies in the system.

The app then provides site managers with an estimate of irrigation run times needed to meet current turf water demand using a simplified approach for automated irrigation systems. Temperatures will also be monitored by the model to determine if they are above the minimum temperature required for growth to occur. App users receive notifications if more than 0.4 inches of rain occurs 24 hours prior to irrigation, rain is expected, or temperatures are too low for growth.

Using the app instead of a set time-based schedule for irrigation, county site managers can provide irrigation amounts to turf that more closely match water needs.

**GROWING PIERCE'S DISEASE RESISTANT VITIS
VINIFERA SELECTIONS IN THE SOUTHEAST**

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Three recently developed Pierces disease (PD) resistant 87.5% *V. vinifera* selections from the U.C.-Davis grape breeding program, namely '502-10', '502-01', and '501-12', were planted at the Chilton Research and Extension Center (CREC) near Clanton, Alabama in 2010 to evaluate their fruit quality characteristics and their field PD resistance in a high PD risk zone. The experimental vineyard is a RCBD with 6 blocks and 5 vines per block. Vines are trained to a vertical shoot positioning trellis system. The first commercial crop was produced in 2012. Our 2014 results suggest selection '501-12' had the lowest pruning weight, while '502-01' had the highest. Selection '502-10' matured early in the season, while '501-12' ripened late. The selections differed in total yield per vine with the late maturing '501-12' producing the largest cumulative

crop of 17.0 kg/vine for the period 2012-2014. '502-10' and '501-01' also produced very good yield. Selection '501-12' had the highest number of clusters per vine, while '502-10' had the lowest. Early-season selection '502-10' had the largest cluster weight, while mid-season selection '502-01' produced the largest size berries. Late season selection '501-12' had the sweetest berries with soluble solids content of 24.2%. The preliminary results of our study are very encouraging. Further research is needed to fully assess the fruit quality of newly introduced *V. vinifera* selections in multiple years.

PROVIDING AN ECONOMIC VALUE TO MASTER GARDENER PLANT CLINICS

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Plant clinics play an important role in solving residential landscape problems. Master Gardeners identify plant diseases, turf diseases, perform soil pH samples and provide insect identification. In-house diagnostics by the UF/IFAS Master Gardeners provide a valuable service to Sumter and Lake County residents at no charge. The University of Florida diagnostic labs currently charge \$8.00 per sample for insect identification, \$40.00 for plant disease submissions, \$3.00 for soil pH and \$75.00 for rapid turf analysis. Costs of diagnostic tests differ among independent private labs.

By identifying and diagnosing samples submitted to plant clinics, UF/IFAS Sumter County Master Gardeners have provided an economic benefit of over \$25,000 to Sumter County residents for 2014-2015. UF/IFAS Lake County Master Gardeners saved Lake County residents \$6,103 from Jan. 1st to March 1st 2015. This cost savings is impactful to county government officials and stakeholders because it demonstrates a return on investment. The purpose of this workshop is to teach participants the methodology and importance of incorporating an economic value to plant clinic services.

PARTNERSHIPS PROVIDES 40 YEARS OF PLANT DIAGNOSTIC CLINIC TO THE NURSERY INDUSTRY

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The purpose for this educational program is to increase commercial horticulture industry members' knowledge and skills for efficient plant production and sustainable practices along with timely and accurate diagnosis of the problem. Program activities include a weekly plant diagnostic clinic conducted at the University of Florida Research Center in Apopka, FL. Area growers bring plant samples to the clinic

and the Extension agent and a team of Extension research specialists will examine the sample. Teaching methods include a one on one conversation about growing methods which includes a list of pesticides used, fertilizers or other treatments applied, use of a hands lens or microscope, measuring soil pH and soil fertility, internet and publications resources. Plant samples brought into the clinic have been the topic of newsletter articles. Over 200 growers attended the plant diagnostic clinic in 2014. Producers participating in this program indicated the value of this program saved them up to \$100,000 a year and the value of the crops saved was up to \$300,000. Ninety-two per cent of them responded that information learned in the plant clinic has been used on the job. A grower brought Viburnum, the roots were not growing and were clubbed. It determined water samples should be tested for salt. An improper application of an herbicide was also determined. This company was facing \$150,000 in lost sales. The plant clinic provided timely and accurate diagnosis.

THE AMAZING NO-TILL MINI-GARDEN

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Interest in backyard vegetable gardening has surged in recent years. Many young families, as well as older individuals, are interested in growing their own vegetables to help reduce grocery costs and provide fresh produce. As awareness of environmental concerns increase, people are embracing sustainable gardening methods with low impact on the land and environment. Problems that inhibit people from growing vegetables include land availability, lack of proper garden tilling equipment, and time restraints to regularly maintain the garden plot.

The Amazing No-Till Mini-Garden addresses these problems and is an easy, low-impact and input type of small space gardening. The method consists of building a simple wooden frame from 2" x 4" lumber. Staple a high quality landscape fabric to one side of this frame. This frame with landscape fabric attached is your mini-garden. Place the frame over mowed existing vegetation or treat area with herbicide. Broadcast amendments based on soil sample and water thoroughly. Cut x's in the fabric, dig hole in soil with hand trowel and plant transplants or seed directly. Mulch to conserve moisture. The frame can be used for many years and can easily be moved every year if soil borne diseases are a problem.

Several trial plots (tomatoes, yellow squash, and pole beans) have been grown with yields equivalent to more traditional gardening techniques. Benefits of this type of garden plot include low maintenance, economy of time and space, conservation of natural resources through use of no-till technique and health/economic benefits of home vegetable gardening.

FACULTY PARTNERSHIPS RESULT IN RESOURCES TO SERVE GROWING HOPS INDUSTRY

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The Virginia craft brewing industry is growing rapidly and demand for locally-grown hops has increased due to shortages, value systems favoring locally-grown materials, and increased interest in the use of fresh hops. Despite the increasing number of growers, Extension resources for the industry were limited prior to 2013. In 2013, a team of agents and specialists met with growers to formally assess needs. Growers requested soil testing for hops, a hops analysis service, pest control information, and management and marketing resources. A team of Extension faculty with a special interest in hops initiated efforts to build university resources for the growing industry. Several faculty teamed together to collaborate with the Old Dominion Hops Cooperative to provide support, continually assess needs, and offer outreach. Agents and specialists organized and presented several hops meetings for stakeholders in 2014, provided interviews about hops to the media, and fielded dozens of questions from prospective growers. In 2013 and 2014, an agent-specialist partnership resulted in a brewer survey which assessed experiences with Virginia hops and provided growers with feedback. The same team issued a 2014 grower survey resulting in data presentations to growers and a summary publication. Agents also relayed stakeholder requests for a hops analysis service and hops soil testing code to specialists and laboratory faculty, resulting in a collaborative meeting and the establishment of both services. Agent-specialist partnerships in 2014 also resulted in a 2015 hops pest management guide, a grower guide, and a weed control guide.

'SURVIVING' PESTICIDE TRAINING – UF STYLE

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Survivor Series-Outwit, Outlast and Outplay, are terms not commonly used when it comes to traditional pesticide training. Applicators can choose to acquire their CEUs through online training or by conventional classroom settings commonly offered through County Extension offices to gain confidence in safe pesticide practices. However, a new trend spearheaded by these agents is to offer themed pesticide trainings. Objectives: Twenty percent of applicators will increase their knowledge by participating in competitive team challenges based on a popular reality based television show Survivor® series. This approach will also lead to positive feedback and increased desire to attend future themed programming. Methods: A pesticide training class was offered in Volusia

County that mimicked the popular Survivor® television reality show. Program topics included: 'Treasure Chest of Safety Relay', 'Targeting Diseases & Insects in Gator Country', 'Jeopardy® Jenga', 'Calibrations and Applicator Mathematics', and 'Identification of Legal Weeds and Herbicide Choices'. These challenges were physical, mental, and edible. Teams were assigned randomly with attendees choosing a colored cloth buff. Throughout the training, contestants competed by answering questions which generated points that were tallied. By the end of the program, one participant from the winning team was chosen by all attendees as the ultimate "survivor". County agents and staff were dressed in tropical themed attire to encourage participation. Results: Post survey results revealed a self-assessment perceived knowledge gain of 21.2%. Fifty-three percent (n=9) indicated that this interactive program was more conducive to learning than conventional classroom trainings. Eighty-two percent (n=14) admitted the television themed program was the draw to attend. Finally, audiences responded with 94% (n=16) indicating their desire to attend future Survivor programming. Impact: "Surviving" Pesticide Training – UF Style was effective by enabling audiences to learn through competitive team challenges and gain confidence in calibration, safety and pesticide use.

CONTAINER GARDENING ON A BUDGET: TEACHING LEON COUNTY CITIZENS TO GARDEN EFFICIENTLY AND ECONOMICALLY

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Home gardening is a concept that, due to recent economic hardships, has become a staple for many families in Leon County. Along with the necessity of cutting back grocery costs; home gardening brings a sense of accomplishment and a therapeutic release for those who participate. Leon County is predominately an urban area and, unfortunately for many members of the Leon County community, gardening space is limited and hard to come by. Adding a new facet to the home gardening concept, in January the LeRoy Collins Leon County Public Library launched its first seed library — giving patrons the opportunity to "check out" seeds from varieties that are grown for taste, not shelf-life and the staff gave out more than 2,000 seed packets in five days. The obvious success of this event opened the door for the UF/IFAS Leon County Extension Office to offer a hands-on class that taught clientele how to assemble a low-budget (approximately \$10), water efficient container garden and tips and tricks for starting their "checked out" seeds. The event was accomplished through collaboration between the Leon County Office of Resource Stewardship, the LeRoy Collins Leon County Public Library, and the UF/IFAS Leon County Extension Office. Over 115 guests were in attendance and each guest was provided with the chance to participate in the hands on assembly of a container garden. At the end of the session 10 completed containers

were raffled off and everyone left with handouts and enough information to start their own container gardens.

REACHING UNDERSERVED AUDIENCES WITH COMMUNITY GARDENS

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Many of the 10,000 residents in Juab County enjoy the benefits of home gardening. These benefits range from growing high quality produce to working with the soil. Most of these people have the opportunity to participate in different types of gardening at their residence. There are also a number of people that reside in rental type housing. Due to the lack of open space at these residences or other situations, many are unable to be involved in gardening. One way to provide gardening opportunities for these residents is through community gardens. In 2014 the first Juab County Community Garden was developed at the county fairgrounds. With the help of \$13,900.00 in grants, a 40' x 100' fenced garden area was developed. The community garden includes 20 4'x10' raised beds, irrigation system, storage shed, garden tools, and equipment. The garden was developed with the help of 100 volunteers that donated nearly 250 hours towards the project. This first year, 20 county residents (mainly senior citizens) each managed their own bed. As a result, nearly 1,800 pounds of garden produce was harvested by the participants. Many positive comments were received from the participants including, "I appreciate all the work that went into this project and the instruction I received. Mr. Banks and Utah State University are a great asset to the community. Thank you." By developing projects such as community gardens, Extension can continue to reach all audiences to improve the quality of life for individuals, families, and communities.

TAKING EXTENSION ONLINE WITH THE HELP OF MASTER GARDENER VOLUNTEERS

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As extension clientele become more tech savvy, the science based information we offer, needs to be provided in places clients are already getting news and information. Websites and social media are great platforms for virtually extending programs, but many extension agents already feel overwhelmed with traditional outreach and don't have time to add another project to the list. Master Gardener coordinators are in the fortunate position to have volunteers that can help them increase the amount of information they share online.

I was one of the overwhelmed agents wanting to expand my outreach to the internet, but could never find the time. This is why I attended the 2014 National Extension Master Gardener Coordinator conference, which focused on technology, social media and how to build a team of Master Gardener volunteers to increase web presence.

With this new information, I approached four tech savvy Master Gardeners to see if they were interested in starting a technology team in Yuma County. We developed our team based on the interest and skills of each volunteer. The team consists of one photographer, a volunteer to develop and upload information to FaceBook, and two website volunteers to develop and upload information about our demonstration garden, the Master Gardener and Urban Horticulture programs. The team was trained by the University of Arizona web developer, on the website platform the university uses called Drupal. I oversee all the material that goes on both the website and FaceBook page.

In just a few months, we have had great success with the technology committee. We went from almost no web presence, to three webpages and a Facebook page, where information is posted and updated regularly. I would like to share what I learned at the conference and how we setup our technology team so other Master Gardener coordinators can use this information in their own counties.

THE GARDENER'S ALMANAC - TIMELY TIPS FOR THE YARD AND GARDEN

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In the Intermountain West region, a high mountain desert, seasonal changes influence not only plants and their development, but also insect pests and disease pressure. Providing timely information to the public is one of Extension's essential roles.

The Gardener's Almanac is a multi-faceted approach in providing and promoting research-based landscape / gardening information in an easy to understand format. As authors, our main audience consists of homeowners, garden enthusiast, and professionals within the landscape / green industry.

The first way that the information is presented is via a traditional peer-reviewed publication. This online format consists of a series of yard and garden-related tasks and activities based on a monthly calendar. The publication has nearly 200 hyperlinks linking the clients to university-sponsored websites and short, how to videos.

Secondly, a mobile app was created, allowing homeowners to receive regular notifications via smart phones or tablets regarding the same landscape / garden related tasks highlighted in the online fact sheet. In the future the app could be linked into local weather databases that would send more specific notifications related to frost damaging temperatures and other critical pest development information.

Finally, a graphic poster was created for approximately 50 local nurseries, highlighting a dozen or more tasks associated with each of the 4 major seasons (winter, spring, summer, autumn). The tasks were selected based on activities or items that the homeowners could do / purchase while at the nurseries or garden centers.

The overall goal in presenting the information in multiple formats, is to introduce a younger audience of garden enthusiasts to the various research-based information and offerings of USU Extension, highlight integrated pest management techniques that promote healthy plant growth, and to support the economy of local nurseries and garden centers.

EXPERIMENTING WITH GROWING ULLUCO AS A NICHE CROP

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Abstract: Ulluco (*Ullucus tuberosus*) has the potential to be farmed as a niche crop in temperate climates outside of the crop's native high elevation South American range. The brightly colored and delicious tubers have considerable consumer appeal for those who become aware of them and offer an alternative to potato growers. Challenges include photoperiod restrictions, along with sensitivity to summer heat and early fall frosts. Cultivars are only available from limited sources in the United States at this time, and evaluation for specific climatic suitability would be desirable. The sharply-sweet, crispy tubers of oca (*Oxalis tuberosa*) and the spicy elongated tubers of mashua (*Tropaelum tuberosum*) have a history of being intercropped with ulluco. All may be grown in United States maritime regions either as separate crops or together if photoperiod restrictions can be selected with future breeding programs. Ulluco is a tasty, desirable crop that has a reputation for being challenging to grow outside of the Andes. As a highly priced seasonal restaurant delicacy, growing ulluco may be worth investigating as a niche crop in protected maritime regions. Along with oca, mashua and yacon, these unique Andean tubers deserve attention from both agricultural researchers and experimental small-scale farmers looking for alternatives to potatoes.

ENCOURAGING EFFICIENT WATER USE THROUGH THE WATER CHECK PROGRAM

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Utah is the second driest state in the nation and Carbon County is on the dry side of Utah. Annual precipitation in the populated areas averages 6-10 inches annually. Ground water in most of the county is not good enough to be used by anything so Carbon County relies on snowfall and surface water to meet the agricultural, industrial, landscape and culinary needs. At the same time, people want to have nice looking landscapes. To address the landscape irrigation issue the author hired a part-time student intern in 2013 and again in 2014 to do landscape water checks. The intern received training on the procedure and the formulas used. Support was obtained from municipalities in the county to pay for mileage traveled. The math involved required a lot of time and checking for errors, so the author developed an Excel spreadsheet to simplify

the process. The program helps homeowners determine the distribution uniformity of their sprinkler systems and the run times needed to meet the requirements of their landscapes. In 2014 the intern tested 103 irrigation zones covering a land area of about 26 acres (several were institutional landscapes). The majority of the recommendations were to first, improve distribution uniformity, then run a check again for run-time recommendations. Newspaper articles in the local media have reported on the program and encouraged resident participation. The program is applicable to any area that is experiencing drought conditions and relies on irrigation to meet landscape needs.

DEVELOPMENT OF A COMMUNITY SUPPORTED AGRICULTURE PROGRAM FOR MEALS ON WHEELS CLIENTS

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The Meals Plus program was developed in 2014 as a collaborative effort between Salt Lake County Aging Services Meals on Wheels and the Utah State University Extension Service. The program sources and disseminates fresh fruits and vegetables weekly to home-bound Meals on Wheels clients in CSA style shares. Although many home-bound seniors receive nutritious mid-day meals through Salt Lake County's Meals on Wheels program, most of these older adults do not have easy access to, or cannot afford, fresh fruits and vegetables for other meals and snacks. The Meals Plus program enhances their nutritional intake with fresh produce. Four primary gardens and community partners supported the Meals Plus program in 2014: the Meals Plus Harvest Garden (managed by Master Gardener volunteers), the Salt Lake County Jail Horticulture program, Green Urban Lunchbox and the Salt Lake City Fruit Share program, and Genesis Youth residents completing court-ordered community service hours at Bell Organic (local urban CSA farm). The Meals Plus program disseminated over 9000 pounds of fresh produce to 160 Meals on Wheels clients weekly in 2014. Survey results found 70% of clients used all the produce they received and 86% felt consumption of the produce improved their health.

Natural Resources & Aquaculture

OHIO RIVER BASIN WETLAND CONSERVATION PLANNING PROJECT

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The Ohio Division of Forestry manages over 200,000 acres of state forest within the Ohio River Basin (ORB), and therefore has a significant influence on water quality issues.

Forested wetlands carry out critical hydrologic, biogeochemical, and ecological water management roles as well as enhancing habitat for a variety of species. Forest wetlands are also excellent carbon sinks and perform natural services such as carbon sequestration, nitrogen and phosphorus remediation, and reduce sedimentation. Since European settlement, Ohio has lost 90% of its wetlands. This presentation will highlight a project where Ohio State University Extension partnering with Ohio Department of Natural Resources - Division of Forestry located, collected water quality and vegetation data on all forested wetlands within Zaleski State Forest. The data collected by OSU Extension staff was provided to ODNR- Division of Forestry (DOF) for addition to the Ohio Statewide Forest Resource Assessment. Recommendations were developed by OSUE to manage, protect, and expand these forested wetlands as appropriate. These recommendations have been provided to DOF for inclusion in the Division's State Forest Strategic Plan.. Another critical role of the project was training for DOF service foresters by Ohio State University Extension to initiate the identification of existing and potential wetlands and incorporate BMPs into Stewardship Plans developed by DOF service foresters. These BMPs were developed to not only protect wetlands and streams but also to enhance associated forest uplands (skid trails, log landings, etc.), critical for the protection and enhancement of water quality "downstream."

WEB-BASED PREVENTATIVE BLOWING AND DRIFTING SNOW CONTROL DECISION TOOL

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Blowing and drifting snow on Minnesota's roadways is a transportation efficiency and safety concern. Establishing standing corn rows, living and structural snow fences or proper grading during road construction improves driver visibility, road surface conditions, and has the potential to lower costs of road maintenance as well as crashes attributed to blowing and drifting snow. These snow control solutions can also provide environmental benefits including carbon sequestration and avoidance of carbon emissions of snow removal operations. In recent years, the Minnesota Department of Transportation (MnDOT) has paid farmers to establish snow control practices to protect identified snow problem roadways. Using public funds to pay landowners to establish snow control practices, which benefit the public and reduce MnDOT winter operating costs, needs to be justified.

In 2012, our snow fence research team created a Microsoft Excel cost benefit payment calculator to estimate payments for farmers that included consideration of safety and snow removal cost savings to the public and the transportation agency. We worked closely with MnDOT engineers and plow

operators to estimate the safety and snow removal costs. Our 2014 project translated the Microsoft Excel tool to a web based tool that can be used on laptops, smart phones and tablets. Beta testing with transportation officials was used to improve the web tool. Outreach programs are being conducted to inform transportation agencies of this tool and the cost benefit analysis it offers. Initial outcomes include transportation authority cost savings and increased public safety. The tool web site: www.snowcontroltools.umn.edu

HELPING LOCAL COUNTY AND MUNICIPALITIES MEET WATER QUALITY GOALS THROUGH TARGETED TRAINING AND TRACKING PROGRAMS

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In 2009, President Obama signed an executive order recognizing the Chesapeake Bay as a national treasure and called on the federal government to lead a renewed effort to restore and protect the nation's largest estuary and its watershed. In 2010, the EPA implemented the Chesapeake Bay Total Maximum Daily Load (TMDL) as part of the Clean Water Act, requiring 6 states and the District of Columbia to reduce water pollution in local streams and rivers. The Bay TMDL must be met by 2025, with pollution reduction goals assigned to the individual states, counties and municipalities and across various source sectors (agriculture, wastewater treatment plants, urban stormwater, and septic).

While a great deal of attention and resources have been committed to many of the pollutant sectors, stormwater runoff from private properties remains one of the most difficult and expensive sources of Chesapeake Bay pollution to control. Specifically: 1) reductions in stormwater runoff can be costly, and many communities/property owners struggle to afford the price tag to meet load allocations through current revenue structures; 2) identifying trained professionals in the design, implementation and/or maintenance of stormwater best management practices (BMPs) can be a challenge; and 3) small-scale, residential stormwater (BMPs) are rarely effectively tracked at the local level by county and/or municipal agencies.

The University of Maryland Extension Sea Grant Watershed Protection and Restoration Team is currently implementing three high profile regional programs that meet the needs of three different audiences within the stormwater sector.

Watershed Stewards Academy - Grassroots efforts of volunteers conversant in stormwater issues who

educate communities and design, implement, maintain, and promote restoration projects focused on stormwater management and improving local water quality.

Chesapeake Bay Professional Landscapers Certification Program – Formalizes a set of conservation landscaping standards and creates a thoroughly trained workforce of landscaping professionals and firms that have the skills and expertise to design, install, and maintain small-scale conservation landscaping practices for efficient nutrient and sediment removal.

Stormwater Management and Restoration Tracker (SMART) Tool – An interactive crowd-sourced mapping and tracking tool that allows for the tracking and certification of small-scale stormwater practices and provides a reporting service for local counties and municipalities.

This presentation will highlight the goals and impacts of these programs.

EDUCATING HOMEOWNERS ON STORMWATER PONDS THROUGH SCIENCE CAFÉ

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Lakewood Ranch Protect Our Ponds is a group of residents, governance, and University of Florida researchers along with UF/IFAS Manatee County Extension. This advisory board provides guidance for community education to the residents on their 320 stormwater ponds. Outreach topics include stormwater pond functions, pond maintenance, landscape maintenance effects on stormwater ponds, pollution runoff, and the best management practices in the landscape.

A variety of outreach efforts have been tried to attract the attention of the community. One very successful attempt was a Science Café. This outreach event featured presentations about stormwater ponds, stormwater runoff, and how residents can protect local waterways. Local and University experts also had information tables with displays and there was a time to ask an expert. Light refreshments were provided to attendees and had a pond theme; algae wraps, pond punch, and aquatic vegetables.

As this educational outreach was advertised we found an interesting attraction to the event from this community. We only allowed 50 attendees to register and advertised it as “limited”. This small detail had community members signing up quickly and resulted in a waiting list.

GROWING EXTENSION IMPACT WITH SYNCHRONIZED WILDLIFE FOOD PLOT DEMONSTRATIONS

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Wildlife recreation generates \$9 billion annually in the state of Florida. A US Fish and Wildlife survey showed that over six million people (Florida residents and non-residents of ages 16 years or older) fished, hunted, or engaged in wildlife viewing activities in Florida in 2011. University of Florida/IFAS Extension Agents representing four North Central Florida counties (Alachua, Bradford, Columbia, and Nassau) teamed with Extension State Specialists to design multiple forage demonstration sites to provide landowners and land managers access to twenty-one varieties of cool-season forage crops suited to wildlife. These demonstration sites provided county agents with hands-on experiences related to the design, site preparation, planting, fertilization, and management of wildlife food plots in their counties. On March 24, 2014, two field days were held to showcase the food plots to clientele. These field days were synchronized to facilitate travel time for speakers and specialists and to provide more opportunities for clients to attend. The demonstrations provided agents and specialists an opportunity to develop and build relationships through hands-on experimental learning experiences tailored to address landowner and land manager needs. Eighty-five participants from ten counties attended the field days and one high school FFA member completed his “Proficiency in Research” project by analyzing forage data collected from the demonstration sites. This project has grown from four participating agents to seven in its second year. By demonstrating the variety recommendations and new cultivars developed for Florida, agents provide data that is used in peer reviewed extension publications.

IMPROVING ECOLOGICAL AWARENESS USING THE BIOBLITZ IN MISSISSIPPI

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A team of Mississippi State University Extension Service professionals developed a curriculum and materials for a series of BioBlitz events across Mississippi. A BioBlitz measures and demonstrates local biodiversity and typically takes place over twelve or twenty-four hours. During this period of time, community participants team with specialists to find and identify as many living species from as many taxonomic groups as possible within a predetermined geographic area. Along with increasing public ecological awareness, the end goal is completion of a thorough inventory of species observed within said area. We utilized specialists, scientists, and county agents from both Mississippi State and external organizations. Educational activities included four twelve-hour BioBlitz events open to the public, an in-service training for county agents, and six high-school educator trainings across the state during the last two years. Additionally, educational materials have been developed to aid in our efforts both during these educational activities and future BioBlitz events. While attendee metrics and comments were collected, it is difficult to ascertain the actual level of knowledge that will be retained by participants. Project details, along with participant and impact data, will be described.

Sustainable Agriculture

SUSTAINABLE AGRICULTURE IN AN URBAN “FOOD DESERT”

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The need to explore new uses for over six thousand vacant lots within the city limits resulted in the “Vacant to Vibrant” Urban Agriculture Pilot Project being conceived in 2009. The City of Dayton and the Ohio State University Extension (OSUE) Agriculture and Natural Resources (ANR) Program were the implementing partners. In 2013 the word pilot was removed from the title and a Community Development Block Grant was awarded by the City of Dayton to OSUE to expand the project. A mission statement for the project was developed: “To increase community engagement while developing agricultural skills using a financially sustainable program model.” The City’s Department of Planning and Community Development established four goals for the project “1. Healthy food alternatives in low income neighborhoods without access, 2. Workforce development – training opportunities (soft skills on being a good employee), 3. Provide business

opportunities for assets the city already has in place, and 4. Economically sustainable model that grows efficiently and finds a market / outlet for the produce.” To achieve these goals business planning classes were held for selected project sites at the Entrepreneur Center funded by the City of Dayton and the Small Business Administration. The Ohio State University Extension ANR Program conducted classes and workshops on growing, marketing, and basic agricultural principles to address the economic viability and environmental sustainability of the project sites. The social responsibility of the project is continually addressed through neighborhood meetings, planned and spontaneous educational opportunities, and interaction between the new farmers with the established agricultural community.

SOIL QUALITY RESULTS FROM LONG-TERM NO-TILL RESEARCH

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In 1964 an experiment was established at the O.A.R.D.C. Northwest Agricultural Research Station near Custar, Ohio. Initiated by Ohio State University scientists Dr. Tripplett and Dr. VanDoren, this research continues to today and compares tillage influence on soil properties and crop productivity.

Long-term no-till had significantly higher yield compared to tillage treatments. Crop rotation had less effect on corn yield. Continuous corn (CC) under no-till (NT) had significantly higher yield compared to a no-till corn / soybean rotation. With tillage, the corn/oats/clover (COH) rotation was significantly higher in yield compared to the continuous corn or corn/soybean rotation.

Soil quality comparisons showed that NT CC at the 0 -2 inch depth had the lowest soil pH and the highest soluble Phosphorus readings. The NT COH treatment at the 0 -2 inch depth had the highest total nitrogen and total carbon. Active carbon levels were highest in all 3 NT rotations compared to tilled treatments in the 0 – 8 inch depth.

All tillage treatments had less variation from 0 to 12 inch soil depth due to redistribution of nutrients and residue during tillage. It can be concluded from this research that no-till crop production for a long duration of 50 years may be beneficial for the environment by sequestering more soil carbon compared to intensive tillage while maintaining or improving crop yields.

EVALUATING OPEN POLLINATED CORN VARIETIES IN SOUTHERN MARYLAND

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Before adoption of hybrid corn open pollinated (OP) corn was grown in the United States. It is still grown in many developing countries. Given the success of hybrid corn in modern agriculture why bother with OP corn? One reason has to do with sustainability. A field of hybrid corn contains genetically identical plants. If one plant is susceptible to a pest,

all plants are equally at risk. A field of OP corn will have more genetic diversity. This reduces risk from pests and adverse growing conditions. OP corn is less dependent on costly inputs and should have better yield stability. OP varieties may be a better fit for local food, organic and small production systems. Seed can be saved and replanted, reducing production costs. There are also opportunities for farmers to do on farm selection and breeding for specific growing conditions or markets. Replicated (3) trials were conducted in 2010 - 2014. In order to keep input costs low, a maximum of 90 lbs N per acre was applied, including N credits from soybeans the previous year. No irrigation was used in years 2012-2014. Yields in 2010 averaged 74 bu/A for all plots. Yields in 2011 averaged 44 bu/A but were considered unreliable as a result of severe damage from Hurricane Irene in early September. Yields in 2012, 2013 and 2014 averaged 94 bu/A. While 94 bushels does not seem very high by hybrid corn standards one needs to consider lower production costs and that corn can potentially be sold directly to consumers for approximately \$1 a pound (56 lbs/bu) or more, a gross return of \$5,264 per acre. This compares to a gross return of \$750 (\$5/bu) an acre for average - good yields (150 bu/A) in Southern Maryland under rain fed conditions with generally an additional 60 lbs of N being applied per acre.

ATTRACTING BENEFICIAL INSECTS TO LOCAL FARMS - BANKER PLANT IN-SERVICE TRAINING

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Pressure to be environmentally friendly combined with significant numbers of pesticides being pulled from the market and replaced with new, more selective products requires Extension agents to keep clients up to date on the latest integrated pest management options. It is crucial Extension agents stay on the cutting edge of new developments in pest management. Many traditional chemical companies have entered the realm of biological product development. Research is being conducted to verify reliable beneficial insect resources and an In-Service Training was necessary to keep agents and growers up-to-date. A beneficial insect rearing plot was installed at the University of Florida Mid-Florida Research and Education Center in Apopka, FL. Crops planted in the plot were evaluated based on ease of establishment and reported to participants. Educational activities consisted of presentations from Extension specialists and researchers, tours of the beneficial habitat plot, a banker plant greenhouse study, a live viewing of beneficials/pests and an overview of beneficial rearing procedures. As a result of the Banker Plant Utilization in the Greenhouse and Field IST, three Commercial

Horticulture Extension Agents are working with their clientele (three citrus groves, a large greenhouse operation, and one large ornamental tree farm) to develop on-farm beneficial insect habitats. One Urban Horticulture Extension Agent is implementing banker plant education into her Master Gardener program and installing banker plants at the county demonstration gardens.

DUAL-PURPOSE COVER CROPS: ADAPTING COVER CROPS TO GRAZING SITUATIONS

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Cover crops are traditionally used as a soil-amending tool, but can also be viewed as a temporary pasture with a source of high-quality feed. Dual-purpose cover crops are utilized by producers wanting to achieve an economic advantage in grazing cover crops before utilizing plant residue for soil management. Cover crops can be grazed in the fall, leaving residual re-growth for spring for additional grazing or for soil incorporation. Using two on-farm research trials and a UI Research Station, researchers evaluated multiple species and mixtures of cover crops for forage biomass production, forage quality, and nitrogen tissue uptake. The research examined two cover crop planting sequences: 1) a post grain, fall planting of cover crops with a fall grazing, and spring incorporation and 2) a high-elevation, full season, spring planted cover crop, with fall grazing and spring incorporation. With seven weeks of fall growth at the UI Research Station, forage biomass was the highest for hairy vetch/triticale followed by Austrian winter pea/triticale. For a post grain, fall planting, a hairy vetch/triticale, Austrian winter pea/cereal, or arvika pea/cereal blend provide quality livestock forage, adequate forage yield, and contributes soil nitrogen. For a 100% legume mix, arvika forage pea yielded more than hairy vetch and Austrian winter pea. Hairy vetch and Austrian winter pea combined with a cereal provide good growth in both the fall and spring, while arvika pea will winter kill. A legume/cereal blend compared to 100% legume reduces seeding costs, increases forage biomass, provides adequate soil nitrogen, and decreases forage quality. The use of dual-purpose cover crops helps to extend the grazing season in the fall and get a jump-start on a feed source in the spring.

COMPARISON OF WESTERN WHEATGRASS FORAGE IN WINDROWS VERSUS STOCKPILING

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Many ranchers and livestock producers utilize western wheatgrass (*Pascopyrum smithii*) pasture during winter in the mixed grass prairie and shortgrass prairie regions. A high proportion of these ranchers defer grazing on these pastures until the dormant season, commonly known as stockpiling grass pasture. However, few of these ranchers know what the forage value of the stockpiled pasture is during the winter or

how this method of forage management compares to a low input alternative such as putting forage in windrows. In this study, we compared putting grass in windrows (treatment) to stockpiling pasture (control). Our objective was to determine if cutting western wheatgrass in late summer and putting the grass in windrows would provide superior forage value than leaving the forage to remain standing in the pasture. The study was conducted from 2011 to 2012 in northeast Colorado. Two large western wheatgrass pastures were each divided into two study plots, each receiving a windrow treatment and a control of 8 ha in size. Pastures were excluded from grazing during the study, and pastures had not been grazed since the winter of 2010. Forage samples of the stockpiled vegetation and the windrows were taken from each study plot during October, December, and early March. Crude protein, acid detergent fiber, and total digestible nutrient values were determined. Treatment comparisons of forage values will be presented.

Teaching & Educational Technologies

IRRIGATION DECISION-MAKING TOOLS FOR PRODUCERS: FOUR APPS FOR SMART PHONES AND TABLETS

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Today's producers are increasingly relying on smart phone and tablet applications or apps to help them make management decisions for their operations. To serve our clientele, it is critical for Extension to be an active developer and provider of apps addressing critical areas of need. In Nebraska, one vital area for apps are those related to irrigation management, with a nation leading 8.3 million acres of irrigated land and over 17,000 irrigated farms. To fill this need, four apps have been developed by the Nebraska Extension Irrigation Water Management group. Each of the four apps covers a different aspect of irrigation management. The Crop Water app allows producers to determine soil water content and last irrigation requirements, helping them time water applications to reduce crop stress and avoid excess pumping. The Agriculture Irrigation Costs app helps producers determine fixed and variable irrigation costs based on their records and irrigation setup. The Irrigation Pumping Plant Efficiency Calculator app helps determine how a producer's pumping plant compares to

the Nebraska Pumping Plant Criteria and recommends how to invest in improvements. Finally, the Water Meter Calculator app allows producers to track water use and pumping restrictions based on allocations, both in season and over multiple years. Based on existing paper or spreadsheet based calculators and publications, these apps were developed for both Apple iOS and Android based smart phones and tablets to meet the needs of a wide range of users. To date these apps have over 2,200 downloads.

IGROW: AN EDUCATOR'S PERSPECTIVE ON UTILIZING SDSU EXTENSION'S TEACHING PLATFORM

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Using technology to leverage the efforts of staff across a larger geographical area is one way to deal with the realities of needing to do more with less, as well as meet the information delivery preferences of today's clientele. iGrow.org is the virtual learning platform used by SDSU Extension to deliver state of the art programming for educational and information outreach.

SDSU Extension faculty specialists, field specialists, and 4-H youth program advisors are located throughout South Dakota on the SDSU campus and research centers, regional Extension Centers, and in strategic county locations. Staff along with select partners publish the latest information within the communities of 4-H & Youth, Livestock, Agronomy, Healthy Families, Community Development and Gardens on the iGrow platform. Stakeholders can view the Our Experts page to access staff contact information, biographies and links to their most recent content.

iGrow.org has become a trusted and reliable source of information for more than 300 farm publications, newspapers, television, and radio stations. During the first year (2011-12), iGrow.org had 63,767 visitors (users); during the third year (2013-14), visitors have grown to 593,559. Our page views were 926,014 in 2013-14 compared to 278,439 in 2011-12.

A third-party marketing firm survey of 400 randomly selected SD crop and livestock producers concluded that not only is SDSU Extension meeting the land-grant mission, but exceeding it due to changes made to the delivery system that were in-line with the evolving needs of SD's agriculture producers. iGrow.org was a very large part of those needed changes.

A TEAM APPROACH FOR UTILIZING SOCIAL MEDIA TO EDUCATE FARMERS AND RANCHERS

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Panhandle Agriculture e-News is a blog, weekly email newsletter, Facebook and twitter account used to provide educational information to commercial agricultural producers in Northwest Florida. The purpose of the project is to provide management recommendations, pest alerts, research updates, government program announcements, and notification of upcoming educational events to farmers and ranchers in the Florida Panhandle. Thirty two University of Florida County Agricultural Agents and Extension Specialists contributed articles that were first posted to a WordPress website by the contributing author. Mayo, the lead agent served as the ramrod of the project, scheduling and reminding authors, created the weekly email summary newsletters with links to new articles added each week. In addition, WordPress applications automatically posted article links to Facebook and Twitter accounts for followers. Two agent editors reviewed articles article for grammar, and style, as well as and formatting. In 2014, 46 issues with brief descriptions and links for 263 articles were emailed weekly to a circulation of 3,314, for a total of 130,628 email contacts that resulted in 68,224 web page visits. <http://nwdistrict.ifas.ufl.edu/phag/> The Facebook page had 242 followers with 1,951 engaged users and a total reach of 22,267. <https://www.facebook.com/FlaPanhandleAgriculture>. The Twitter account had 218 followers that received 627. <https://twitter.com/PanhandleAg> or @PanhandleAg. Survey results from 87 subscribers indicated: 80% found this service valuable, 88% read the applicable articles in every issue, 76% increased knowledge of recommended management practices, 23% scouted for pest reported in the region, and 17% changed management practices based on information provided in the articles.

CREATING FARMER-TO-FARMER NETWORKS FOR BEGINNING AND SMALL FARMERS

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One important outreach and educational tool that agricultural professionals, farmers and extension educators can use to facilitate small farms, young and beginning farmer success is the creation of farmer-to-farmer networks (sometimes known as communities of practice). Communities of practice approaches learning as social participation. Their function as an enhancement to learning is well known (Wenger, 1999; Wenger et. al 2002). While there are beginning farmer programs emerging in most western states, there is a lack of organized farmer-to-farmer social networking and training in this region. The project Creating Farmer-to-Farmer Networks for Beginning and Small Farmers aimed to accomplish a

number of objectives related to farmer networks. The first objective was to design a toolkit for developing farmer-to-farmer networks. The toolkit, now complete and available for download, contains information on the relevance and impacts of farmer networks, a facilitation manual, and corresponding outreach materials including sample fliers, a list of potential activities and class offerings, possible organizational structures, and an explanation of on-line social networking opportunities. Second, we designed and conducted four half-day trainings in Washington, Idaho, Oregon and Montana for agricultural professionals on the nuts and bolts of starting a farmer network. In addition, we designed and conducted four half-day meetings with pilot women farmer networks in WA, OR, ID and MT. The meetings resulted in the successful formation of three women farmer networks and the training of forty agricultural professionals. Evaluation and impact data has been collected over the last year as a way to measure success of the project.

FIELD ON THE MOVE: PRODUCING LIVE, FIELD-BASED EDUCATIONAL WORKSHOPS VIA A MOBILE, OUTDOOR PRODUCTION STUDIO

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In addition to conventional Extension and outreach approaches (workshops, fact sheets and field days), we aim to advance our bilingual social media Extension and outreach campaign to remote users on a national scale by streaming live video directly from agricultural fields to web-based audiences across the US and beyond. Essentially, our team is one of the first to use a mobile platform to reach growers, industry liaisons and agricultural representatives using an interactive, high quality, outdoor production studio. For Field on the Move to stream live to viewers, we provide Internet access through the use of a high speed portable Wi-Fi and/or connected USB modem. A production switchboard transmits a live video stream through this internet connection to viewers using tablets, cell phones or computers. For easy access to the Field on the Move live stream, we share an external connection link through our social media websites featuring the capacity to receive and view live interactive viewer comments and questions via a Twitter account embedded within the system (#FieldontheMove). This approach to managing questions and answers during live Field on the Move events via Twitter enables us to connect with viewers within remote field environments as experienced in a classroom setting.

2015 AM/PIC SPEAKER PROFILES

Michael T. Scuse

Under Secretary for Farm and Foreign Agricultural Services



Prior to this position, Scuse served as Deputy Under Secretary for the FFAS mission area from 2009 to 2011 with primary responsibility over our domestic programs (Farm Services Agency and Risk Management Agency). Before joining USDA, Scuse was Secretary of Agriculture for Delaware from May 2001 until September 2008, when Governor Ruth Ann Minner (D) named him as her chief of staff. From 1996 to 2001, Scuse served as both chairman of the Kent County (Delaware) Regional Planning Commission and chairman of USDA's FSA State Committee. Before that, he was Kent County Recorder of Deeds. In addition to serving as NASDA vice president while agriculture secretary, Scuse was also president of the Northeast Association of State Departments of Agriculture. He lives in Smyrna, Delaware, with his wife Patrice.

Dr. E. Gordon Gee

*President, West Virginia University
Emeritus President, The Ohio State University
See Service to American/World Agriculture Award Recipient Write-up*

Waded Cruzado

President of Montana State University

Waded Cruzado serves as the 12th President of Montana State University, an institution recognized by the Carnegie Foundation as one of 108 universities for its "Very High Research Activity." Cruzado has significantly reshaped the face and future of the state's first land-grant institution. An inspirational speaker on the role of land-grant universities, she has become a well-known champion of the land-grant's tripartite mission of education, research and public outreach.



President Cruzado has been honored as the 2011 Michael P. Malone Educator of the Year by the Montana Ambassadors for outstanding accomplishment, excellence and leadership in the field of education. In 2012, President Barack Obama appointed Dr. Cruzado to the Board for International Food and Agricultural Development (BIFAD), a seven member advisory council to USAID, whose primary role is to advise on agriculture, rural development and nutrition issues related to global food insecurity and the eradication of hunger in the world. Most recently, President Cruzado received the Chief Executive HR Champion

Award from the College and University Professional Association for Human Resources.

Manny Scott

Founder of Ink International, Inc.



Manny Scott is an original Freedom Writer whose story is told in part in the 2007 hit movie, *Freedom Writers*, starring two-time Academy Award-winner Hilary Swank and Grey's Anatomy's Patrick Dempsey.

By age 16, his story was almost over: his father was incarcerated, he dropped out of school at age 14, lived in 26 places by age 16, and his best friend was brutally murdered.

But he turned the page and began writing new, more fulfilling chapters in his life—chapters filled with healing, hope, perseverance, and possibility. He is now happily married, a father of three, a successful entrepreneur, a Ph.D. student, and one of the nation's most sought after speakers. He has spoken for the Department of Education and the National Education Association. He has appeared on Nightline and featured on *The View*—and survived!

He is the founder of Ink International, Inc., a movement of people everywhere who want a more interesting story. He conducts workshops for teachers and students and speaks at assemblies in school districts all over the country. He empowers students and leaders to take responsibility for their own success, equips teachers to engage, reach, and teach youth today, and encourages parents to play a more active part in the educational journey of their children. He rallies people to turn the page to begin writing new chapters in their life's story.

ANNUAL MEETING AND PROFESSIONAL IMPROVEMENT FUTURE CONFERENCE DATES

2016

Little Rock Arkansas...July 24-28

2017

Salt Lake City, Utah....July 9-13

2018

Chattanooga, Tennessee...July 29-Aug 2.

2019

Fort Wayne, Indiana....Sept. 8-12

