



DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Enlist Herbicide Demonstration

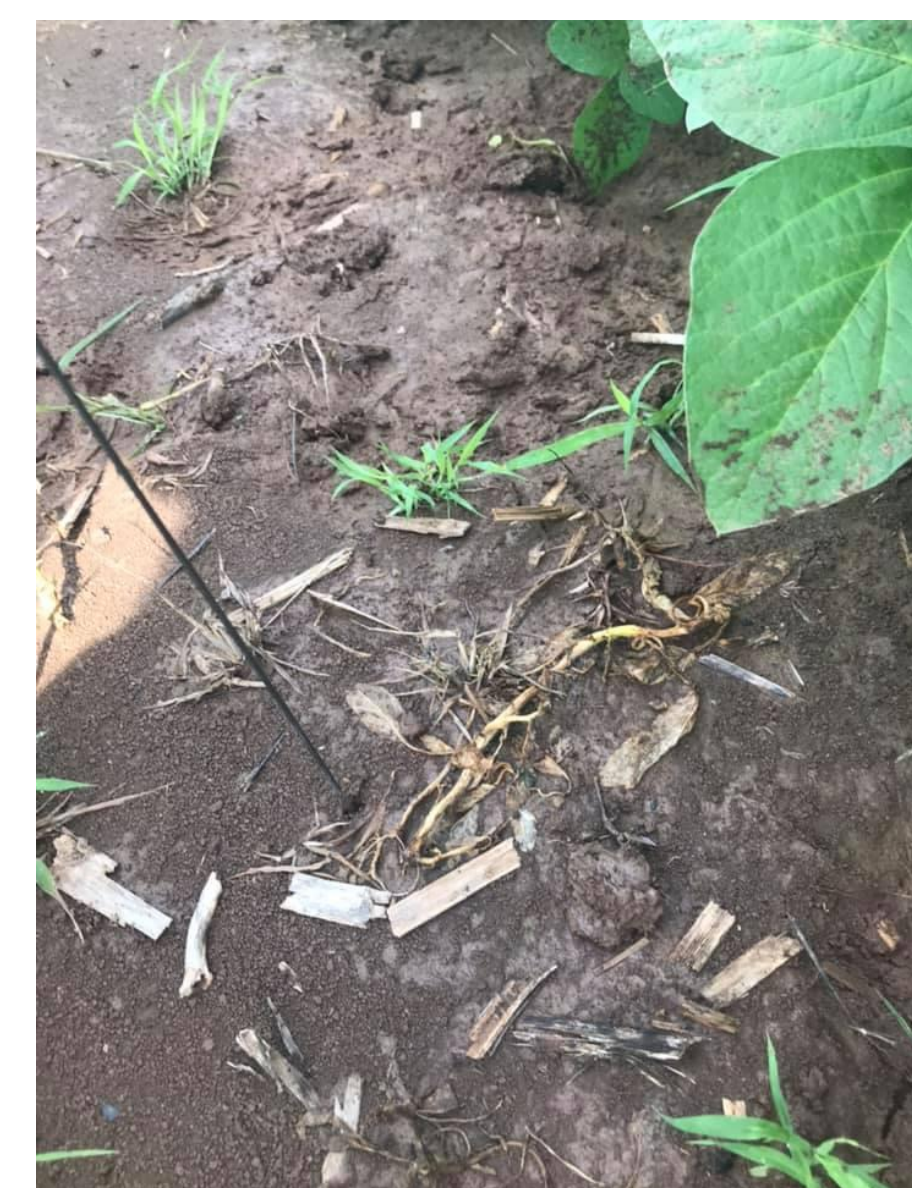
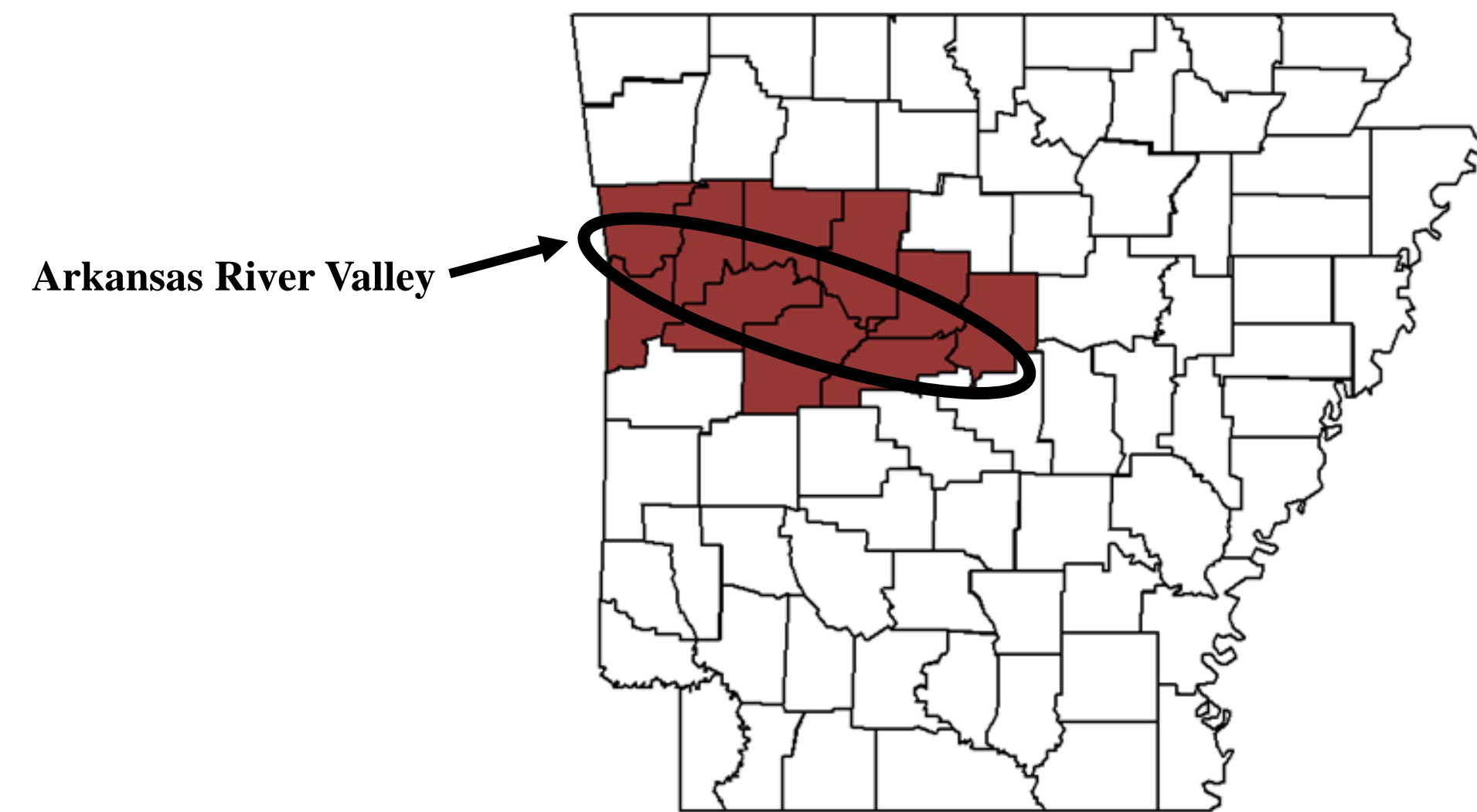
Kevin Lawson – County Extension Agent – Staff Chair, Faulkner County
University of Arkansas System, Division of Agriculture, Cooperative Extension Service
klawson@uaex.edu



DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Need

Faulkner County is located in the central part of Arkansas. The majority of Arkansas' row crops is located in the Eastern part of the state, but there are significant acres located in what is called the Arkansas River Valley. This area of row crop land is scattered on both sides of the Arkansas River from Fort Smith in western Arkansas to Little Rock in Central Arkansas. Like most of Eastern Arkansas, the River Valley area has seen an increase in herbicide resistant weeds like pigweed. The Liberty Link system is used by the majority of River Valley producers with good results. The introduction of Enlist E3 Soybeans has given producers in the area another good tool to help with the fight against resistant weeds. The Enlist system has three stacked traits of glyphosate, glufosinate and 2,4-D choline tolerance.



Pigweed (left) and Waterhemp (below) controlled by Enlist Herbicide



Demonstration

Two new herbicides were approved to be used on Enlist E3 Soybeans, Enlist One and Enlist Duo. Producers in Faulkner County weren't sure how to use the new products or what to expect from their use. A demonstration was established with several different applications of Enlist One and Duo herbicides.

The demonstration was set up in a producers field that was planted in an Enlist E3 variety. Each plot was 10 X 50 feet and sprayed with a backpack CO₂ sprayer with a 10 foot boom at 15 gpa. Initial applications were sprayed on July 13, 2019 and treatments that required a second application were sprayed on August 2, 2019. The majority of weeds were around 3 inches in height when the applications were made.

Treatments

1. Check
2. Enlist Duo 3.5 pints
3. Enlist One 2 pints
4. Enlist One 2 pints + Roundup Weathermax 23 ounces
5. Enlist One 2 pints + Liberty 29 ounces
6. Enlist Duo 3.5 pints + Mocassin 1 pint
7. Enlist Duo 3.5 pints followed by Enlist Duo 3.5 pints
8. Enlist One 2 pints followed by Enlist One 2 pints
9. Enlist Duo 3.5 pints followed by Enlist One 2 pints
10. Enlist Duo 3.5 pints followed by Liberty 29 ounces



Results

Single application treatments were evaluated at 20 days after application. The treatments that received a follow up application were evaluated at 20 days after that application. The results are listed in the following table.

Treatment	Rate	Cost per acre	Percent Control 20 Days after Treatment					
			Pigweed	Morning-glory	Cocklebur	Hophornbeam Cooperleaf	Grass	Water-hemp
Enlist Duo	3.5 pts	\$11.38	90%	80%	100%	80%	100%	100%
Enlist One	2 pts	\$9.12	90%	80%	100%	80%	0%	100%
Enlist One + Roundup	2 pts 23 oz	\$14.52	90%	80%	100%	80%	100%	100%
Enlist One + Liberty	2 pts 29 oz	\$22.46	100%	90%	100%	90%	20%	100%
Enlist Duo + Mocassin	3.5 pts 1 pt	\$17.76	90%	80%	100%	80%	100%	100%

Treatment	Rate	Cost per acre	Percent Control 20 Days after Follow By Treatment					
			Pigweed	Morning-glory	Cocklebur	Hophornbeam Cooperleaf	Grass	Water-hemp
Enlist Duo FB Enlist Duo	3.5 pts 3.5 pts	\$22.76	100%	90%	100%	90%	100%	100%
Enlist One FB Enlist One	2 pts 2 pts	\$18.24	100%	90%	100%	90%	0%	100%
Enlist Duo FB Enlist One	3.5 pts 2 pts	\$20.50	100%	90%	100%	90%	100%	100%
Enlist Duo FB Liberty	3.5 pts 29 oz	\$24.72	100%	100%	100%	100%	100%	100%

Distribution of Results

- 75 River Valley Row Crop Demonstration Summaries were handed out at the River Valley Row Crop Production Meeting
- 30 Faulkner County Demonstration Summaries were distributed to the Faulkner County Quorum Court and Faulkner County Farm Bureau
- The Faulkner County Demonstration Summary placed on the website <https://www.uaex.edu/counties/faulkner/newsletter.aspx>
- Facebook and Twitter social media accounts
 - Facebook <https://www.facebook.com/uaexfaulknercounty/>
 - Twitter <https://twitter.com/uaexfaulkner>
- Field day held on August 13, 2019
 - 40 producers were in attendance to see the demonstration first hand and ask questions.



Impact

The participants of the field day were surveyed and 95% of the participants reported that they would use Enlist while 84% reported the demonstration provided considerable new information. Updates about the demonstration reached 4000 contacts through social media. Economic data was included with results. Producers could potentially make \$111 more an acre by using Enlist One followed by Liberty versus no treatment at all.