



DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

BERMUDAGRASS STEM MAGGOTS

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Relevance

Bermudagrass in Perry County this year has shown signs of bermudagrass stem maggot damage. Adults lay eggs on stems near a node and the larvae migrate to the last node and will burrow in the shoot. There the maggot feeds on vascular tissue causing the top two to three leaves to die. As a result, it affects bermudagrass growth.



Red highlighted area is Perry County.



Adult fly that produces the larvae.

Response

Four insecticide treatments were actually applied for Fall Army Worms in this field. Inadvertently two of the insecticide treatments controlled the stem maggots and two did not. We had full control of the Fall Army Worms and all of the damage was a direct result of the stem maggots. The plots were replicated 3 times for a total of 12 plots in the field. Extension recommendations were followed treating 7-10 days post-harvest. We harvested the plots right before the producer harvested the rest of the field. The purpose of this was to determine yield loss and quality data as a direct result of bermudagrass stem maggot.

Products used in plots

Lambda-Cy
Lambda-CY + Dimilin
Intrepid
Fawligen

The left side is Fawligen and the right side is Lambda-Cy. Notice the color and height difference?



Left side is Lambda-Cy and right side is Fawligen

Results

Results concluded in treated areas with dry matter in pounds per acre to be at 3,465, and 3,464 in treated plots and 2,603, and 1,730 pounds per acre in non-treated plots respectively. Plot data resulted in a yield difference of 1,735 pound per acre yield loss or approximately 50%. Perry County averages 3 tons per acre per year of hay production on 12,660 acres of bermudagrass. The average cost of bermudagrass hay in this area is \$80 per ton which equals \$240 per acre per year potentially. So \$240 multiplied by 12,660 acres is \$3,038,400 of potential hay revenue. If reduced 50% by stem maggot damage the result would be \$1,519,200 of lost revenue. Treatment cost for stem maggots is around \$24 per acre per year and would be \$303,840. That could save Perry County hay producers \$1,215,360 after treatment cost. Each treatment plot was sampled and sent to the University of Arkansas Agricultural Diagnostic Laboratory for quality analysis. There was no quality difference between all of the plots.

Product:	Lbs per Acre Dry matter:
Lambda-Cy	3,465
Lambda-Cy +Dimilin	3,464
Intrepid	2,603
Fawligen	1,735



Notice the difference in height between these two plots?

