

Bermudagrass Stem Maggot

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The bermudagrass stem maggot (*Atherigona reversura*) is becoming a troublesome insect in bermudagrass pastures and hayfields across Tennessee. This insect was first noticed in Georgia in 2010, although it is native to south Asia. The damage from this insect occurs at the last node of the stem where the leaf emerges. The larva or maggot (immature stage of the fly) burrows into the shoot and feeds, and the leaves above the feeding area die (Figure 1). The discoloration of the upper leaves causes the field to look like there has been a light frost. If left uncontrolled, up to 80 percent of the tillers in the field can be affected, resulting in significant yield reduction.

Insect life cycle — The life cycle of the maggot begins when the fly lays an egg on a bermudagrass leaf. The larva emerges approximately two to three days later (Figure 2). The larva soon bores into the upper portion of the tiller, feeding on the sap from the stem. Chlorosis (leaf yellowing) will be seen one to three days later. Mature larvae exit the stem and pupate in the soil for seven to 10 days, after which the flies emerge. Work done by Will Hudson and Dennis Hancock at the University of Georgia has shown that the flies can live for approximately 18-20 days. Multiple overlapping generations of bermudagrass stem maggot during the growing season may occur.

Scientists currently believe that this insect overwinters in the Gulf states and migrates into our area in summer. Infestations of the bermudagrass stem maggot typically get steadily worse as the season progresses.

Control strategies — Bermudagrass fields should be inspected routinely for damage during the summer. When approximately 10-20 percent of the plants show damage, a producer should plan to control the insect. Infested



*(Photo by Dennis Hancock, University of Georgia)
Figure 1. Dead leaves above the bermudagrass stem maggot feeding area.*



*(Photo by Dennis Hancock, University of Georgia)
Figure 2. Bermudagrass stem maggot larva.*

fields should be harvested if they are within seven days of normal harvest. Heavily infested fields should be harvested earlier, and any baled grass should be removed. Current recommendations are to treat infested, recently harvested fields with a foliar-applied insecticide within seven to 10 days after harvest. Properly timing this application is critical for successful suppression. A second insecticide application seven to 10 days later may be justified where moderate or severe infestations are present.

If harvest is not an option, two insecticide applications made 10 days apart will break the life cycle of the insect and minimize the damage. Table 1 includes a list of recommended insecticides. Please refer to “PB 1768: Insect Control Recommendations for Field Crops” for all recommended crop insecticides. Be sure to read and follow all instructions on the insecticide label.

Table 1. Suggested insecticides for bermudagrass stem maggot control.

Insecticide	Rate	Harvest Restrictions
Besiege (chlorantraniliprole, λ cyhalothrin)	6-10 oz.	0 days application restriction for grazing or hay
Baythroid XL1 (β-cyfluthrin)	1.6-1.9 oz.	Do not harvest for hay within 7 days: 0-day grazing restriction
Karate 2.08, Warrior II (λ cyhalothrin)	1.3-1.9 oz.	Do not harvest for hay within 7 days: 0-day grazing restriction
Mustang Max 0.8 (Z-cypermethrin)	2.8-4 oz.	0 days application restriction for grazing or hay



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