

## FORAGE

# Bermudagrass stem maggot invades Southern states

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**The** bermudagrass stem maggot, *Atherigona reversura*, was first discovered in southern Georgia bermudagrass fields in 2010. This small fly (Photo 1) is native

to South Asia, and it is unknown how it invaded the United States. Damage to bermudagrass is caused by the adult fly laying eggs in the tips of bermudagrass shoots. Fly eggs hatch into larvae (Photo 2) which bore inside the shoot and feed down to the first node. Larvae feeding damage causes death of the leaves that are growing out of the end of the damaged shoot. This gives damaged fields a “frosted” appearance that looks much like light freeze damage. Damaged shoot tips can be easily pulled from the shoot revealing feeding damage from the larvae.

Since first being identified in Georgia, the bermudagrass stem maggot has been busy expanding its territory west. It has been confirmed in Mississippi, Arkansas and east Texas, and has reportedly been found in Oklahoma.

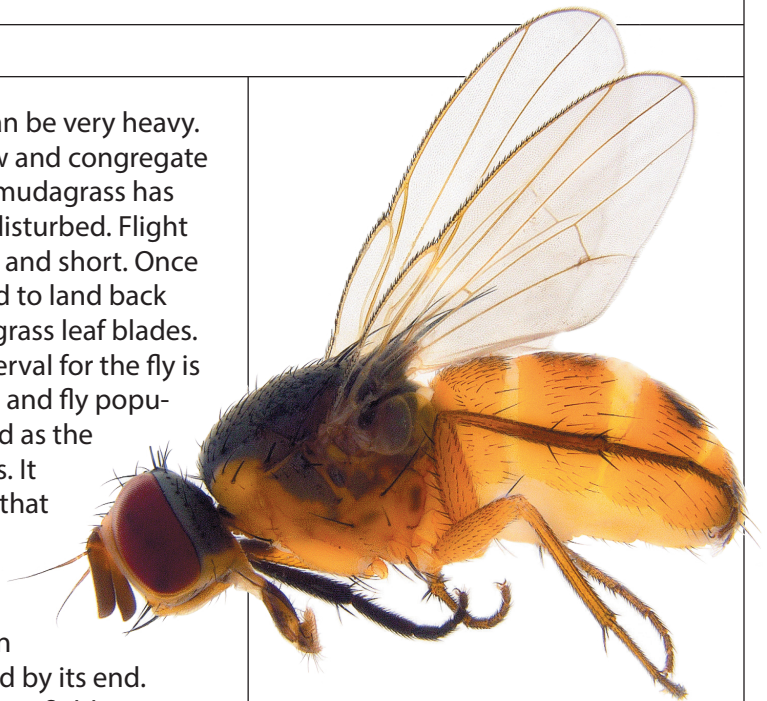
Adult flies are about the same size as horn flies with yellow abdomens and four dark spots found on the upper abdomen. Fly populations

in infected fields can be very heavy. They tend to fly low and congregate in areas where bermudagrass has been trampled or disturbed. Flight patterns are erratic and short. Once disturbed, flies tend to land back onto the bermudagrass leaf blades. The generation interval for the fly is about three weeks, and fly populations tend to build as the summer progresses. It has been reported that fields that appear lightly damaged in the first part of the growing season can be heavily damaged by its end.

Bermudagrass hay fields appear to sustain more and heavier damage than fields that are grazed, due to the cattle removing areas of the plant that the flies use to lay eggs in and reproduce. The flies also tend to have variety preferences, tending to ►

*Photo 1, top, right: Adult bermudagrass stem maggot (Photo by MSU Extension Service/Blake Layton)*

*Photo 2, right: Bermudagrass stem maggot larvae (Photo by Dr. Dennis Hancock, University of Georgia Forage Extension specialist)*



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prefer fine stem varieties over coarse stem varieties. Yield effects of the bermudagrass stem maggot are uncertain, and more research is needed to establish control thresholds. Some estimates of potential yield losses are 10 percent or less for well managed bermudagrass, but some Georgia producers estimated yield losses of up to 50 percent in 2013.

Adult flies can be controlled with the pyrethroid insecticides, but multiple applications may be required to minimize hay damage. There cur-

rently are no labeled insecticides for control of the larvae as it feeds inside the stem. As mentioned previously, additional work needs to be done to determine population treatment thresholds and the economic benefits associated with control measures. Making a hay cutting of infested fields is another management option as this tends to break up the generation interval since haying removes all potential egg-laying sites for adult flies. Specialists from the University of Georgia are recommending a combi-

nation of harvesting and spraying to control very heavy populations.

Reports on the bermudagrass stem maggot theorize that this pest is here to stay. If that is the case, management strategies will need to be developed to deal with it. Part of this management strategy will be to keep existing bermudagrass fields robust and healthy. This will help to minimize impacts on yield. Keep an eye out for this little fly. If you suspect that your bermudagrass may be suffering from its effects, let us know. ■