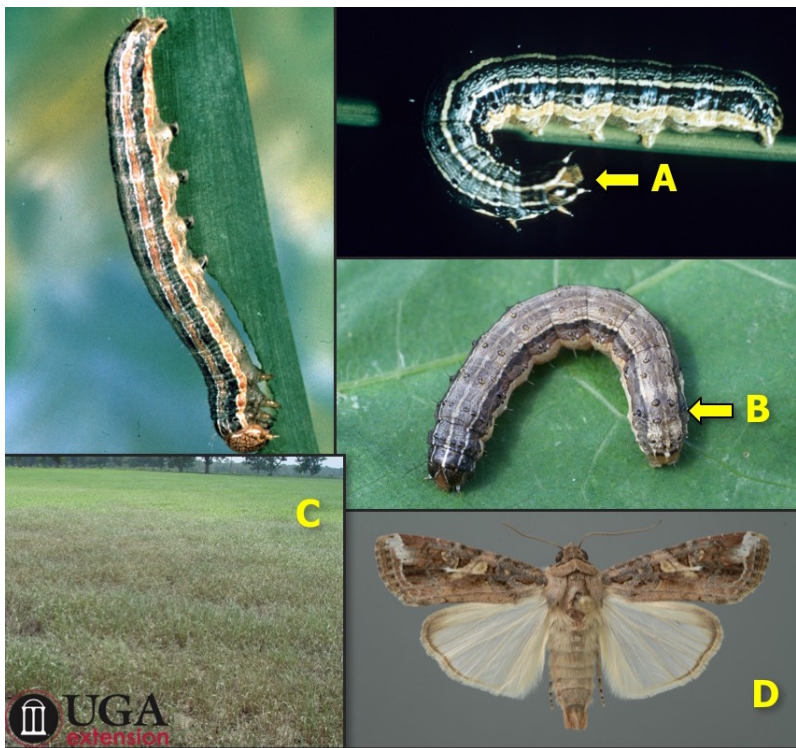


In late summer, almost every year, caterpillars invade pastures, hay fields, and turfgrass throughout the state. Particularly in pastures and hay fields, damage may be severe before the worms are noticed. The grass is not killed, but hay yield and forage can be reduced to almost nothing over whole fields in extreme cases. The long-term damage to established pastures or hayfields is mostly aesthetic, but newly sodded or sprigged areas can be severely damaged or even killed.

In late summer and fall, most of the worms are fall armyworms (FAW). The adult moths are active at night and females lay eggs in batches of 50 to several hundred. Eggs hatch in 2 - 10 days, and the young larvae begin to feed on leaf tissue. Damage from small larvae may at first look like skeletonizing, but as the worms grow, the entire leaf is consumed. Armyworms are most active early and late in the day, spending the hotter hours down near the soil in the shade. Larvae feed for 2 to 3 weeks before pupating in the soil. Moths emerge 10 - 14 days later.



Fall Armyworm (*Spodoptera frugiperda*)

One of the most prominent and chronic insect pests in the Southeast. The caterpillars feed on nearly all forage crops. Fall armyworms are most numerous in late summer or early fall, with reports of damage usually beginning in July or early August.

The top three photos are of fall armyworm caterpillars (larvae). Note the Y-shaped stripe on the head (A) and the dots on the rear (B) of the caterpillar. It is the caterpillars which damage the stand by consuming the leaf and leave the stem. Note the damage done to a bermudagrass hayfield (C). Fall armyworm caterpillars can defoliate a whole field in a matter of a few hours. The adult stage in the fall armyworm's life cycle is a moth (D). The fall armyworm cannot overwinter in Georgia. However, the moths invade Georgia each year from southern Florida and Central and South America.

While fall armyworms are the most likely caterpillars to invade pastures, they are not the only ones. True armyworms damage pastures in late spring some years, but usually disappear as the season progresses. The damage is fleeting but can significantly reduce forage or delay the first cutting in hay fields. Unlike FAW, true armyworms can overwinter throughout the state. The worms closely resemble FAW and treatment, if needed, is the same.

More widespread and common in pastures throughout the state is the striped grass looper, *Mocis latipes*. This worm is easily distinguished from armyworms by its “looping” method of crawling. Size is similar to armyworms (full grown larvae are about 1 ½” inch long), but *Mocis* has many stripes running lengthwise down the body, including the head. Moths are active throughout the growing season, and populations can build to levels that rival FAW outbreaks. When mature, *Mocis* worms have the distinctive habit of pupating up on the grass plant, in a folded leaf, rather than in the soil like armyworms.

A number of insecticides are labeled for use on caterpillars in pastures. Familiar stand-bys are carbaryl (Sevin and others), the pyrethroids (many brands with active ingredients that end in -thrin), spinosad (Tracer and others), and the insect growth regulators Dimilin and Intrepid. The newest product registered on pastures for caterpillars is chlorantraniliprole (Coragen and Prevathon).

Carbaryl has a 14-day grazing restriction. Labeled pyrethroids include cyfluthrin (Baythroid), lambda-cyhalothrin (Karate and others) and zeta-cypermethrin (Mustang and others). These are contact insecticides that have relatively short residual activity in the pasture system in the hot weather usually associated with caterpillar infestations, but they have no grazing restrictions. These products vary from 0 to 7-day hay harvest restrictions, so be sure to read the label of the product being used. Regardless, the pyrethroids do a good job of controlling small to medium size worms. Spinosad products include Tracer, Blackhawk and others. The only grazing restriction is the cows should not graze until sprays have dried. Pre-harvest interval for hay is three days. Dimilin and Intrepid work by disrupting the molting process, and will not kill the worms as quickly. These products are very effective on small (<1/2” or so) worms, but less effective as the worms get larger. They are not a rescue treatment for heavy infestations of large armyworms. There is no grazing restriction for Dimilin or Intrepid. Prevathon gives longer residual control and is labeled at 14 - 20 oz./acre with no grazing or harvest restrictions.

The decision many farmers struggle with is whether to apply one of the contact insecticides (a pyrethroid is the most common choice) that is cheaper (often less than \$5/acre) or go to the more expensive Prevathon for the longer residual control that product offers. There is no easy formula to use to come up with the “best” answer, as the situation is different for every year and every farmer. In general, the earlier in the year armyworms appear, the more likely it is that several treatments will be necessary. That would make the extra cost of Prevathon a good investment if you can treat once instead of incurring the application costs of repeat applications. In years with good growing conditions, many farmers see the last cutting as insurance that they will likely not need (and so, not worth the extra cost), while in dry years the late cutting may be the difference between getting through the winter or buying hay later.

In any case, control of caterpillars depends on good coverage. It helps to increase your spray volume as much as possible, particularly on larger worms. Driving the sprayer at a slower speed may be necessary to achieve this. Also, one should recognize that tall grass is more difficult to cover than shorter grass. If the hay is close to ready, cut it before treating. Recognize that very large worms are tough to kill and the best option may be to wait until the next generation and target the smaller worms. Sometimes, the next generation will move on and no treatment will be necessary.

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