

The Fall Armyworm - Pest of Pasture and Hay. 2015

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The fall armyworm, *Spodoptera frugiperda*, is a common pest of bermudagrass, sorghum, corn, wheat and rye grass and many other crops in north and central Texas. Larvae of fall armyworms are green, brown or black with white to yellowish lines running from head to tail. A distinct white line between the eyes forms an inverted “Y” pattern on the face. Four black spots aligned in a square on the top of the segment near the back end of the caterpillar are also characteristic of fall armyworm. Armyworms are very small (1/8 inch) at first, cause little plant damage and as a result infestations often go unnoticed. Larvae feed for 2-3 weeks and full grown larvae are about 1 to 1 1/2 inches long. Given their immense appetite, great numbers, and marching ability, fall armyworms can damage entire fields or pastures in a few days.

Once the armyworm larva completes feeding, it tunnels into the soil to a depth of about an inch and enters the pupal stage. The armyworm moth emerges from the pupa in about ten days and repeats the life cycle. The fall armyworm moth has a wingspan of about 1 1/2 inches. The front pair of wings is dark gray with an irregular pattern of light and dark areas. Moths are active at night when they feed on nectar and deposit egg masses. A single female can deposit up to 2000 eggs and there are four to five generations per year. The fall armyworm apparently does not overwinter in north Texas, but survives the winter in south Texas. Populations increase in south Texas in early spring and successive generations move northward as the season progresses.

Management. Fall armyworm outbreaks in pastures and hay fields often occur following a rain which apparently creates favorable conditions for eggs and small larvae to survive in large numbers. Hay fields with a dense canopy and vigorous plant growth are often more susceptible to armyworm infestations than less intensely fertilized and managed fields. Irrigated fields are also susceptible to fall armyworm infestations, especially during drought conditions. Also monitor volunteer wheat and weedy grasses in ditches and around fields which may be a source of armyworms that can move into the adjacent crop.

Look for fall armyworm larvae feeding in the crop canopy during the late evening and early morning and during cool, cloudy weather. During hot days, look for armyworms low in the canopy or even on the soil surface where they hide under loose soil and fallen leaves. A sweep net is very effective for sampling hay fields for fall armyworms. When fields are wet with dew, armyworms can stick on rubber boots worn while walking through the field. Small

larvae chew the green layer from the leaves and leave a clearing or “window pane” effect and later notch the edges of leaves.

The key to managing fall armyworms is frequent inspection of fields to detect fall armyworm infestations before they have caused economic damage. Once larvae are greater than $\frac{3}{4}$ inch long, the quantity of foliage they eat increases dramatically. During their final 2-3 days of feeding, armyworms consume 80% of the total foliage consumed during their entire development.

The density of armyworms sufficient to justify insecticide treatment depends on the stage of crop growth and value of the crop. Seedling plants can tolerate fewer armyworms than established plants. Infestations of more than 2-3 armyworms (1/2 inch or longer) per square foot may justify an insecticide application. If practical, apply insecticides early in the morning or late in the evening when armyworm larvae are most active and therefore most likely to come into contact with the insecticide spray. If the field is near harvest, an early harvest, rather than an insecticide treatment, is an option.

Parasitic wasps and flies, ground beetles, and insect viruses help suppress armyworm numbers. However, these natural enemies can be overwhelmed when large numbers of migrating moths move into an area and weather conditions favor high survival of eggs and larvae.

Insecticides Labeled for Armyworm Control in Pastures and Hayfields.

Always read and follow all label instructions on pesticide use and restrictions. Information below is provided for educational purposes only. Read current label before use.

Karate Z. 13.1% lambda cyhalothrin. Fall armyworm and grasshoppers. Pasture and rangeland grass, grass grown for hay and silage and grass grown for seed. Pasture and rangeland grass may be used for used for grazing or cut for forage 0 days after application. Do not cut grass to be dried and harvested for hay until 7 days after the last application. Restricted use insecticide.

Lambda-Cy. 11.4% lambda cyhalothrin. Fall armyworm and grasshoppers. Pasture and rangeland grass, grass grown for hay and silage and grass grown for seed. Pasture and rangeland grass may be used for used for grazing or cut for forage 0 days after application. Do not cut grass to be dried and harvested for hay until 7 days after the last application. Restricted use insecticide.

Mustang Max. 9.6% zeta-cypermethrin. Fall armyworm and grasshoppers. Applications may be made up to 0 days for forage and hay, 7 days for straw and seed screenings. Restricted use insecticide.

Tombstone Helios. 25% cyfluthrin. Fall armyworm and grasshoppers. Pasture, rangeland, grass grown for hay and seed. Zero days to grazing or harvesting hay. Restricted use insecticide.

Warrior II. 22.8% lambda cyhalothrin. Fall armyworm and grasshoppers. Pasture and rangeland grass, grass grown for hay and silage and grass grown for seed. Pasture and

rangeland grass may be used for grazing or cut for forage 0 days after application. Do not cut grass to be dried and harvested for hay until 7 days after the last application. Restricted use insecticide.

Baythroid XL. 12.07% cyfluthrin. Fall armyworm and grasshoppers. Pasture, rangeland, grass grown for hay and seed. Zero days to grazing or harvesting hay. Restricted use insecticide.

Dimilin 2L. 22% diflubenzuron. Fall armyworm and immature grasshoppers. Dimilin must be applied before armyworm larvae reach ½ inch or larger. Provides residual control for up to 2-3 weeks, as long as forage is not removed from the field. Label does not list a restriction on grazing.

Prevathon. 5% chlorantraniliprole. Fall armyworm and grasshoppers. Prevathon has a 0 day waiting period for harvest or grazing and is not a restricted use insecticide.

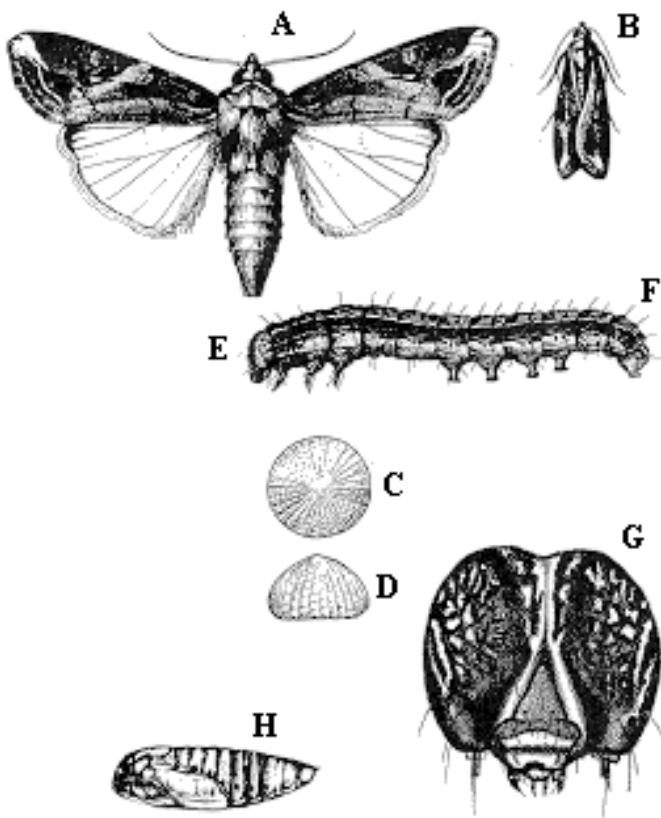
Besiege. 9.26% chlorantraniliprole and 4.63% lambda cyhalothrin. Fall armyworm and grasshoppers. Pasture and rangeland grass may be used for grazing or cut for forage 0 days after application. Do not cut grass to be dried and harvested for hay until 7 days after the last application. Restricted use insecticide.

Sevin 4F, Sevin XLR, Sevin 80S, Generic Carbaryl. Fall armyworm and grasshoppers. When applied to pastures, there is a 14 day waiting period before grazing or harvesting.

Malathion_57% and Malathion ULV. Fall armyworm and grasshoppers. Zero days to harvest or grazing.

Intrepid 2F. Fall armyworm (not grasshoppers). Begin applications when first signs of armyworm feedings appear. Use higher rates for heavier infestations. Do not harvest hay within 7 days of application. No pre-harvest interval for forage. 0 days to grazing.

Tracer. Treat when armyworm eggs hatch or when larvae are small. Use higher rates for larger larvae. Do not graze until spray is dry. Do not harvest hay or fodder for 3 days after treatment. Do not allow cattle to graze until spray has dried.



Fall armyworm. A & B, Adults. C- E, Eggs (enlarged) and egg mass. F & G, Larva with front view of head. H, Pupa.