



# INSECTS AND WEEDS IN FOCUS

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## BE ON THE ALERT FOR FALL ARMYWORM IN COTTON

On Monday, June 27 many reports of small larvae feeding on boll bracts and the surface of bolls or in blooms were received from scattered areas throughout the Coastal Bend. The insects are fall armyworms (FAW). These infestations appear to be heavy and widespread. There has been some natural mortality, but it may not be great enough to reduce numbers below economically damaging levels. Close inspection is necessary to find the small larvae by examination of blooms and boll bracts.

Much of the following information comes from the Alabama Cooperative Extension Service.

**Identification** Eggs of FAW are whitish and are deposited on plant leaves in masses of up to 150. These groups, which may be two or three eggs deep, are covered with a grayish fuzz. The egg masses range in size up to one-half the size of a dime. Although eggs may be placed anywhere on the plant, they are usually placed on the bottom of older, more mature leaves. Often these leaves are closest to the ground, making egg masses difficult to spot.

Newly hatched FAW larvae are white or clear with black heads. Older larvae have a black dot above and behind the third pair of true legs (those nearest the head). This dot may not be visible. As they feed, larvae become darker. Older larvae range from light green to almost black with lighter colored stripes running the length of the body. The head is dark and shiny and is marked with an inverted Y. FAW larvae resemble bollworms, but the Y is usually more prominent. Mature FAW larvae reach a maximum of 1 1/2 inches.

Usually more than 90% mortality will occur with only a few first instar larvae surviving out of an entire egg mass. These larvae will do no etching or leaf feeding at the site of hatch. On the other hand, most newly hatched beet armyworm (BAW) larvae will survive and begin skeletonizing the leaf immediately. This will result in a brown area on the upper leaf surface. This spot is referred to as a "hit" by scouts.

As the larvae mature, the FAW may take on a pinkish-brown color with a black dot on the first segment behind the third pair of true legs. The BAW may be more olive green in color and have a black dot above the second pair of true legs.

A further identifying point is that FAW's occur and feed as individual larvae while older BAW larvae feed in groups, which are usually associated with one bloom or leaf.

**Damage** Primary damage caused by FAW on cotton is from their feeding on the fruit. Tiny larvae will feed on boll bracts but do not eat all the way through, leaving a windowpane effect. This is referred to as "etching". The larger, more mature larvae may completely devour squares. They feed extensively on blooms and severely damage bolls by eating the interior portions.

**Control** FAW populations can be difficult to control after larvae move into blooms or inside squares or boll bracts. Once larvae are hidden, they are difficult to reach with insecticides.

Based on the feeding habits of FAW, control with insecticides (as previously stated) is difficult to achieve. Very little leaf feeding has been observed; therefore, insecticides with contact action should provide the best chance for control although excellent coverage is still needed. In Alabama, entomologists believe that best control has been achieved with contact insecticides (pyrethroids). One option for controlling FAW, according to Ron Smith in Alabama, would be two treatments of a pyrethroid, made about five days apart. The newer caterpillar insecticides will also kill FAW, but much better coverage is required (more ingestion needed).

Ground applicators should use at least 2 hollow cone nozzles per row, close to 10 gpa total volume, and 45-50 psi. Drop nozzles should be used if at all possible.

RDP

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