Mid- to Late-Season Insect Control in Cotton

- There are several insect pests to watch out for late in the season near or after first bloom.
- Late-season insects can be difficult to control due to dense crop canopies, and poor insect control can reduce yield potential even late in the season.
- Different control measures can be used. Depending on the insect complex, a tank mix of insecticides may be necessary.

Cotton insect pests to watch out for later in the growing season include the following:

**Spider mites**
Infestations may flare under hot and dry conditions and first appear in field borders as light tan to yellowish discoloration on the underside of the leaves (Figure 1). As feeding continues, the upper leaf surface may redden in color.¹ Spider mites may become an issue if beneficial insects are killed by an insecticide spray to control another insect pest. Treatment can help control the spread of spider mites and more than one application may be required if eggs continue to hatch.

**Stink bugs**
There are several species of stink bugs. This insect will pierce small bolls and suck the sap from seeds. Internal boll damage includes stained lint or callous growths inside the boll. Feeding can also allow entry of boll rots. Damaged bolls may either open early or become hardlocked and not open. Different insecticides are recommended for control of different stink bug species. If stink bug populations reach threshold, organophosphate insecticides can provide control of southern green and brown stink bugs. Pyrethroid insecticides may help control southern green stink bugs.

**Plant bugs**
*(Tarnished plant bug/cotton fleahopper)*
These insects will puncture both cotton squares and a small developing cotton boll to cause damage (Figure 2). Multiple generations may overlap in one growing season. Watch for nymphs after first bloom as their presence means reproduction is occurring. Dirty blooms and darkened anthers are signs of plant bug feeding.² Refer to your state Extension threshold levels to determine when treatment is necessary.

**Aphids/Whitefly**
These insects suck sap from plants causing stunting and leaf curling. Honeydew will be deposited on leaves and may be found in cotton fiber, reducing quality. Treatment should be considered when spots of high aphid populations are causing heavy honeydew accumulation and there are no signs of diseased aphids.³ Do not apply an insecticide if there are dead aphids present, meaning natural control agents are working to manage populations.

**Bollworm/Tobacco budworm**
These insects will often be found together in a field.¹ Both worms eat the same plant structures and are similar in morphology. Tobacco budworms are known to be resistant to multiple insecticides. In corn growing regions, bollworms will typically deposit eggs in cotton fields.
after moths emerge in nearby cornfields. Eggs are deposited on upper leaves and will hatch after 3 days. As the season progresses eggs and larvae may be found anywhere on the plant, especially blooms or young bolls (Figure 3). Frequent scouting is recommended. Genuity® Bollgard II® provides excellent control of bollworm and tobacco budworm. Under situations of high pressure treatment may be needed, refer to local extension recommendations.

**Fall armyworm**

Look for an inverted “Y” mark on the larvae head as proper identification is critical for control of this pest. Problems may occur late in the season. The moth may lay eggs on the underside of leaves and larvae may be found feeding on younger growth, bloom tissue or pollen. The larvae will eventually feed on cotton bolls (Figure 4). Genuity Bollgard II does provide some control of armyworm; however, plants are not immune to injury. According to Clemson University, economic threshold for fall armyworms is met when 10 larvae are found per 100 plants.¹ It is best to time insecticide application to coincide with egg hatch or larvae emergence.

**Summary**

When insect threshold levels are met late in the season first consider what cotton technology is planted in the field. Even when fields are planted to technology that manages certain insect pests, under high populations an insecticide application may be needed for additional control. Be sure insect pests are at threshold prior to treatment. Insect control should be terminated at 5 nodes above white flower (NAWF) plus 350-400 DD60s. Cotton fields do not need treatment after this stage as the plants are less attractive to insect pests and the boll can tolerate more damage without reducing cotton yield potential.

**Sources:**


For additional agronomic information, please contact your local seed representative.