



SOYBEAN INSECT MANAGEMENT FACT SHEET

This is one in a series of fact sheets from the Mississippi Soybean Promotion Board and the soybean checkoff. Each sheet presents a brief overview of a topic important to Mississippi soybean production. More information on each topic can be accessed through the link at the bottom of the sheet. To see other fact sheets, click [here](#).

Controlling damaging populations of insects is always a production issue in Midsouth soybeans. The decision to apply control measures is usually based on “thresholds”, which is the number of insects of a particular species that have reached the level estimated to reduce yield enough to cause economic loss. Thresholds for triggering insect control measures are the best tool available at the present time.

Generally, two methods are used for counting insects in a crop—sweep nets and drop cloths. The drop cloth is the most accurate method to sample for soybean insect pests, but both methods give objective measures to generate estimates that have been used to develop thresholds. In narrow-row soybeans, the sweep net is the preferred method of sampling.

Insect species that can cause economic damage to soybeans in the Midsouth are grouped into two classes—stem feeders and foliage feeders. Research-based recommendations for economic thresholds that should be used to make control decisions have been established for most of the common insect pests encountered in Mississippi soybean fields. Also, there are recommended classes of insecticides to use for needed control of each problem insect.

The integrated pest management (IPM) approach should be used for insect management in all soybean production systems. This includes scouting to monitor insect pest populations throughout the growing season in order to prevent 1) unnecessary insecticide applications that will increase production costs and reduce profit, 2) a reduction in beneficial insect numbers, and 3) development of insect resistance to available and efficacious classes of insecticides.

In numerous cases, simultaneous infestations of several foliage-feeding insect species will occur in a given field. When this condition exists, control measures should be applied when any combination of these insects meets or exceeds the treatment threshold.

Naturally occurring diseases (fungal, bacterial, and viral) and beneficial predators and parasites are important in the control of insect pests, and can often keep harmful insects from reaching treatable levels. There are two major points to consider regarding these natural controls. 1) The presence of diseased insect larva indicates that a population of harmful insects is being controlled naturally, so insecticide applications should be withheld for a short period to determine if the disease will effectively control the harmful insect population. 2) Some early-season applications of insecticides to soybeans can significantly reduce predators and parasites. Thus, regular scouting of soybean fields to determine the levels of both harmful and beneficial insects is especially important during vegetative soybean development in order to protect the beneficials so that their full benefit will be realized.

It is important to remember that insecticides with different modes of action should be rotated to prevent or delay the development of insect resistance to a particular class of insecticide chemistry. When doing this, be aware that performance ratings and application restrictions/guidelines may be different for the different classes of insecticides that have efficacy against the same insect species.

Insect infestations during soybean reproductive development will cause the most damage to soybean yield potential. Thus, treatment thresholds for most insects are more stringent during this period of soybean development and observed or suspected insect infestations should be monitored closely.

Click [here](#) for a detailed discussion of this topic, and [here](#) for the Miss. Soybean Scouting Guide..