

Most of us have been pleased with the level of whitefly control we have experienced in our fields to date. Yet the most crucial period of control is just beginning. Whitefly management is particularly important as the bolls begin to open, because the exposed lint may become contaminated with honeydew. The cotton crop must continue to be protected from whiteflies through defoliation including leaf drop. When using IGRs to gain this protection, special consideration needs to be given in deciding whether to make a first treatment, when to retreat, and whether to treat before the September 1 deadline.

First Treatment with IGRs

Timing the first treatment for IGRs requires the proper sampling of both adults **and** nymphs (see IPM Ser. No. 2 & No. 6). Prior to the use of any other whitefly insecticides, the treatment threshold for the first IGR is 3–5 adults per leaf **and** 0.5–1 large, visible nymph per quarter-sized disk on the fifth mainstem node (MSN) leaf.

Timing Retreatment

Proper timing of an insecticide application following an IGR application depends on:

- the whitefly population growth trend,
- adult and nymph numbers,
- the type of insecticide to be sprayed.

Conventional Materials

Before spraying conventional materials, there should be evidence that the IGR action is ceasing, adult levels are increasing and at least 5 adults per leaf are present.

Insect Growth Regulators

Before treating with Applaud after a Knack™ application, there should be:

- evidence of hatching eggs in top 5 MSN leaves,
- a minimum of 0.5–1 large, visible nymph per quarter-sized disk on the 5th MSN leaf.

Before treating with Knack after an Applaud application, there should be:

- evidence of molting young nymphs in the top 5 MSN leaves,
- a minimum of 0.5–1 large, visible nymph per quarter-sized disk on the 5th MSN leaf.

Remember that Applaud cannot be applied within 21 days of a Knack application, and Knack cannot be applied within 14 days of Applaud.

September 1 Deadline

Because the deadline for IGR use under the Section 18 is September 1, a grower may elect to treat before the whitefly threshold is reached in order to use an IGR. The decision of whether or not to treat below threshold hinges on how long green foliage will be present.

If defoliation is imminent, IGR applications at this time may not be warranted. If, however, irrigations have only recently been terminated or are yet to occur, the crop may remain “green” for another 30 days, even after chemical termination. Whiteflies can complete two more generations during this time. Therefore, if there is a need to protect the crop for another 30 days **and** whiteflies are present, it might be prudent and cost-effective to apply an IGR just before September 1, even if whitefly numbers are below the recommended threshold. However, before such an application is considered, an **increasing trend** in whiteflies should be evident with:

- levels of at least 1–3 adults per leaf, and
- evidence of emerging adults from nymphs.

Otherwise, it is better to hold off and await the threshold of 5 adults per leaf for use of conventional compounds as needed.

Note: The 1997 deadline for IGR use is 9/30. (pce 5/5/97).

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