

# Start scouting small grains for insect pests

NEWARK, DEL. — Regular scouting of small grain crops for insect pests over the next few weeks can help protect farmers from future yield losses. According to University of Delaware extension past management specialist Joanne Whalen, growers should be on the lookout for three insects - aphids, armyworms, and grass sawflies.

"The potential for insect outbreaks in the 1984 small grain crop will depend on a variety of factors," the specialist says. "But generally severe outbreaks are associated with weather.

### Grain aphids

Probably the best example of this phenomenon is the relationship between grain aphids and spring weather conditions. Between 55 and 65 degrees F, aphids reproduce very rapidly. However, at these temperatures, their natural enemies reproduce slowly, permitting aphid populations to increase. On the other hand, says Whalen, aphids are very susceptible to fungal diseases which occur during periods of rain and high humidity. So aphids are most likely to be a problem during cool, dry spring weather.

Even though weather plays such an important role in insect outbreaks, the specialist says growers should still sample fields for aphid activity while grain is in the tiller stage. "There's some indication that infestations of this pest may affect grain test weight," she explains. "This means early detection of populations is very important."

When sampling for aphids, check one linear foot of row in 5 to 10 sites within a field. If aphids are present, consider the following factors before applying an insecticide: level of infestation, size and vigor

of crop, moisture conditions, and presence of natural enemies. Before grain heads, use the following thresholds in deciding whether or not to treat:

Plant Height (Inches)
3 to 6
4 to 8
6 to 16

heads. Such damage can result in total yield loss.

When scouting for armyworms, be sure to check for small larvae on field edges and in lodged areas.

No. Aphids/Linear Ft. of Row
50 to 100
100 to 300
300 to 700

When grain is heading, check at least 50 to 100 heads throughout the field for aphids. Treatment may be needed if aphids average 25 per head.

### Armyworm

Armyworm outbreaks are also affected by weather. However, outbreaks are generally sporadic and populations vary from year to year and field to field. Whalen says heavy infestations often occur following a dry summer and mild winter. A cool, wet spring also appears to favor this insect. Though the 1982-83 winter was fairly mild, last spring's raw, damp weather resulted in high armyworm pressure in many small grain fields. So the potential for outbreaks this year may depend largely on spring conditions.

As with any pest, the specialist says it is important to detect armyworms while they're still small and easy to control. The first three instars feed only on the outer surface of leaves and cause no damage. Larvae more than 1/2-inch long feed heavily on leaf blades and cut off stems just below grain

Look under debris and at the base of plants as well. Scout one linear foot of area between two rows in at least 10 to 20 sites within a field. Spray if you find one or more larvae per one foot of row innerspace.

Grass sawfly outbreaks, unlike aphids and armyworms, have not been related to weather. Sawfly larvae are pale green, with a dark head and distinct white face. They begin to climb stems and feed when only half grown, while wheat is in the tiller to heading stages. Thus, a single sawfly larva is much more destructive than an armyworm which only clips nearly ripe grain heads. Head and stem clipping usually peaks around May 10, approximately 10 days before armyworm activity starts. For this reason it's very important to scout early for sawfly larvae.

Sample a 5-foot-long area between two rows in at least five locations with a field. Since high populations often occur along field edges, take at least one or two edge samples. Whalen says growers should treat when they find an average of two or more sawfly larvae per 5 feet of row innerspace.

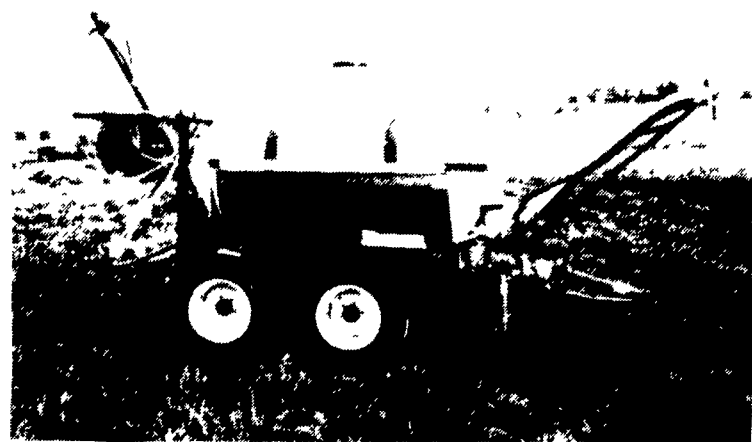


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