

SCOUTING FOR EARLY-SEASON PESTS IN YOUR CORN

Check fields early and often to limit yield-robbing insect damage

Few sights are as satisfying as a newly emerged cornfield. Rows of petite plants in perfect picket-fence formation bring both a smile and a sense of satisfaction.

But admiration from the cab of the pickup does little to ensure those stands reach their full potential. Scouting for early-season insects and other pests is crucial to protecting the yield of this year's crop. Whether you're kicking up dust or sinking in the mud, it's important to get out into your fields early and often.

Scout before planting

While insecticide seed treatments and corn hybrids with Bt traits work some of the time and for some pests, they can't eliminate all problems. Wireworms, white grubs and seed corn maggots still can cause early-season crop damage.

Wireworms attack both the corn seed and young plants. This insect is especially problematic when corn follows grass or legume-grass sod. When high wireworm populations exist, use a soil insecticide at planting to reduce stand loss; seed treatments can help with moderate populations. Once damage is found, there are no effective rescue treatments.



Wireworm larvae may live in the soil for up to six years, feeding on plant roots. Wireworms can cause economic loss to crops planted in fields that have been sod for several years. Adults are called click beetles.



K-State University, Department of Entomology

Similarly, white grubs and seed corn maggots also can be abundant in fields following sod, pasture or where manure has been spread extensively. While grubs damage corn roots, maggots feed on germinating seed and seedlings. In addition to insecticide seed treatments, several products are available for in-furrow application during planting. However, there are no rescue treatments.



Scout fields for white grubs prior to planting, especially following sod, pasture or where manure has been spread.

Alton N. Sparks, Jr., University of Georgia, Bugwood.org

Ideally, farmers should scout for these pests before planting. A baited wire trap is an effective method. Cut a two-foot-long and three-inch-wide strip of quarter-inch hardware cloth. Bend the strip in half lengthwise at a 90-degree angle to provide rigidity. About two weeks before planting, place 20 untreated corn seeds about one inch apart on each trap. Bury each trap two inches deep in the soil. Install at least one trap for every acre of corn to be planted.

After two weeks, remove the traps and assess feeding damage on the seeds. A granular insecticide may be needed at planting if the average number of seeds damaged is:

- 10% or more for wireworms
- 5% or more for white grubs
- 25% or more for seed corn maggots

Scouting after corn emergence

Field corn should be scouted at least weekly from emergence until plants are roughly 12 inches tall. Doing so helps determine not only pest pressure but also stand loss and plant populations. Pests to watch for during this time include cutworms, corn flea beetles, billbugs, stink bugs and slugs.



Black cutworm is most problematic in weedy, late-planted fields with poor drainage, especially during cool, wet springs.

Phil Sloderbeck, K-State University, Department of Entomology

Before scouting, gather some basic tools, including a hand trowel, insect guide, notebook, pencil and tape measure or yard stick. To begin, walk in a zigzag pattern across the field looking for damaged plants, which may be wilted, discolored or cut off or show evidence of feeding. Dig up the entire seedling to diagnose the issue. If the problem involves insects, 99 more plants (33 per row in three adjacent rows) should be examined. Record the number of damaged plants. Repeat this process nine more times randomly across the field, unless after the fourth sample, it's obvious that pests exceed thresholds.



Rescue treatments are recommended for billbug infestations at a threshold of 5% or greater seedling loss.

Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org

Cutworms can be particularly damaging to corn from planting through mid-June. Fields planted late due to a wet spring are likely targets. Leaf feeding is the first sign that cutworms are present; look for small, irregular holes in leaves and cut plants. Threshold recommendations vary somewhat by region, but a rescue treatment should be applied when 5% of plants are cut at the third- to fifth-leaf stage and four or more cutworms are found per 100 plants.

Depending on the region, other early-season pests impact corn. Corn flea beetles feed by stripping away the top layer of plant tissue. Seedlings less than six inches tall are most impacted, and rescue treatment is recommended when feeding damage is evident in 50% of sampled plants and five or more beetles are present per plant.

Billbugs and stink bugs both feed on corn seedlings and may cause “suckering,” or the development of tillers. Rescue treatments are recommended for billbug infestations at a threshold of 5% or greater seedling loss and for stink bug infestations that exceed 8% of sampled plants.

While not an insect, slugs also pose a potential threat to seedling corn. Slug populations tend to be higher in no-till/ridge-till systems or in weedy fields with large amounts of surface residue. Feeding that occurs from emergence through the four-leaf stage can cause the most severe damage. Leaves will appear split or tattered, resembling damage from a hailstorm. Although there are no established rescue treatments, chemical baits containing metaldehyde can be applied to the field for slug control.

Continued scouting is key

While many early-season pests can impact vegetative growth, these and others — including army worms, corn borers and stalk borers — also can impact a corn crop during tasseling, silking and grain fill. Continued scouting throughout the growing season is crucial to ensuring the highest yield potential.

For help developing an early-season scouting program, contact your nearest Southern States agronomy team member at www.southernstates.com/agronomy/meet-our-team.