

# *Win* THE BATTLE AGAINST BUGS IN YOUR BEANS

Scout soybeans early to keep unseen infestations from curbing yields

## Don't wait to scout

When it comes to tolerating insect attack, few crops are as resilient as soybeans. The legume can endure low levels of defoliation, root/nodule feeding and even flower/pod damage with little to no effect on yield.

However, while soybeans possess an amazing capacity to overcome such damage, some infestations do require action. That's why it's important to scout bean fields early and prevent pests from negatively impacting your pocketbook.

## Wireworms: Bait for better planting decisions



Frank Peairs, Colorado State University, Bugwood.org

Wireworms can damage one or more parts of a soybean seed. In some cases, they can completely hollow out the seed, leaving only the seed coat. They also may cut off small roots. Damage commonly occurs when soybeans are planted early and the weather turns cold, slowing germination and seedling growth. Fields where sod or small grains were grown the previous year are more likely to harbor wireworms.

Two to three weeks before planting soybeans in fields where wireworms are suspected, establish bait stations in five areas of the field. Bury a mixture of untreated corn and wheat seed six inches deep and cover the site with a piece of black plastic. Prior to planting, dig up the bait and check for wireworms and damage. If an average of one live wireworm is found per bait station, consider planting the field with another crop, such as corn, for which labeled insecticides are available.

## Scout the soil

As is the case with corn, some soybean pest problems lurk below the surface of the soil and can be problematic as soon as soybeans are planted. Of particular concern are wireworms, white grubs and seed corn maggots.

While insecticide seed treatments can help prevent some issues, there are no rescue treatments should a problem develop with these pests. Scouting fields prior to planting ensures a soybean crop gets off to a good start.

## White grubs: Two or more, use insecticide



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

White grubs are an occasional pest of soybean seedlings. Damage typically appears as gaps in rows where plants failed to emerge or as wilted, discolored or dead seedlings. Scout for grubs prior to planting by digging up five random soil samples across the field. Dig an area two feet long, one foot wide and six inches deep, collecting roughly one cubic foot of soil. Examine the soil for the presence of grubs; two or more per sample may signal a problem. Consider planting another crop that benefits from an insecticide labeled for grubs.

### Seed corn maggots: Plant for fast early growth



*Purdue Cooperative Extension Service*

Seed corn maggots can be abundant in fields with manure or high residue. They burrow into the soybean seed and destroy the germ, leaving large gaps in the stand. In fields where maggots are suspected, use a seed treatment and delay planting until soil conditions favor rapid germination. Should this strategy fail to control seed corn maggots and damage is widespread, replanting may be necessary.

### Three-cornered alfalfa hoppers: Spray if one in ten young plants is infested



*Gerald J. Lenhard, Louisiana State University, Bugwood.org*

With their piercing-sucking mouthparts, three-cornered alfalfa hoppers feed on sap and can cause damage to seedlings and young soybean plants, which may result in lodging later in the year. While thresholds are not well-established for this pest, treatment is recommended when 10% or more of a stand less than 12 inches tall is infested.

### Post emergence: Scout weekly

From emergence on, soybeans should be scouted at least weekly for pests that feed on leaves, stems and eventually pods. As plants grow and the canopy develops, scouting should transition from visual inspection of individual plants to a combination of inspection and insect sweep net surveys.

While visual damage can be disconcerting, remember that soybeans are able to overcome it without yield loss. Not only can treatment be unnecessary and take away from profits, but these insecticides also kill beneficial insects such as assassin bugs and lacewings that provide some biological pest control.

As a general rule, don't treat for leaf-feeding insects unless more than 30% of the foliage is lost before blooming or more than 15% is lost from two weeks before blooming through pod fill. Threshold tables and calculators can help determine when treatment is needed. Soybean pests of concern early in the season include bean leaf beetles, cutworms, armyworms, soybean thrips and slugs.

### Bean leaf beetles: Early appearance in soybeans is a cause for concern



*Ward Upham, Kansas State University, Bugwood.org*

While bean leaf beetles can be found in most soybean fields each year, economic damage is rare. However, they are pests of concern from seedling emergence until the first trifoliate leaf has unrolled. Damage to seed leaves appears as scooped-out pits. A 30% pre-bloom defoliation typically warrants treatment.

## Cutworms and armyworms: Greater threat in reduced-or no-till fields



*John Capinera, University of Florida, Bugwood.org*

Depending on a grower's region, both cutworms and armyworms damage soybeans. Cutworms may be found from plant emergence until late June and are more likely to be found in fields planted under reduced-till or no-till practices. Some species of armyworms can be found throughout the season, though potential for damage is greatest with young stands and late-planted seedling soybeans. For these pests, 30% defoliation prior to blooming is the threshold for treatment.

## Slugs: Wet conditions favor their numbers



*Joseph Berger, Bugwood.org*

While not an insect, slugs also pose a potential threat to young soybean plants, especially when wet weather is pervasive. Most often found in weedy fields and conservation tillage systems, slugs usually feed on the lower part of the plant, eating partly or completely through the hypocotyl and cotyledons. If feeding is significant, plant density may be reduced and impact yields. There are no rescue treatments for slugs; however, chemical baits containing metaldehyde applied at 10 pounds per acre can help provide some control.

## Soybean thrips: These sap suckers leave scars



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Soybean thrips are another regional pest that can wreak havoc early in the season. From emergence to V6, soybeans are particularly susceptible to this insect, which feeds on sap. When a plant is heavily infested, feeding scars can create a mottled look on the leaves. Hot, dry weather increases the threat. If scouting reveals damage to 75% of sampled trifoliate leaves with an average of eight thrips per leaf, treatment may be necessary.

## Scout — then scout again

While many early-season pests can impact vegetative growth, these and other insects — including soybean aphid, cloverworm, soybean looper and stink bugs — also can impact a soybean crop during flowering, pod growth and pod fill. Continued scouting throughout the growing season is crucial to ensuring the highest yield potential.

For help developing an early-season scouting program for your soybean crop, contact your nearest Southern States agronomy team member at [www.southernstates.com/agronomy/meet-our-team/](http://www.southernstates.com/agronomy/meet-our-team/).