WIREWORMS
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Economic wireworm damage to field crops is rare, but when present, wireworm can be very destructive and difficult to control. Wireworms feed on the seeds, roots and stems of plants. Large numbers can be present in fields with a grass or mixed vegetation. They are usually found attacking the first or second year after crops are planted on ground that has been in sod for several years. However, wireworm populations may be reduced by half after the second year following sod. Land that has been in continuous bluegrass sod is more likely to have high numbers of wireworms than fescue sod.

Wireworm reduce plant populations, because they feed on the seeds prior to or just after germination. The plant stand may continue to decline, because wireworms bore into underground portions of stems, causing plants to wither and die. They continue to feed upon the small roots of many plants throughout the season. Most wireworm larvae have elongate hard, chestnut-brown bodies that vary from ½ to 1-½ inches long when grown. Some species are soft, and white or yellowish in color.

Wireworms are especially destructive to corn, but all the small grains and nearly all cultivated and wild grass are attacked. They also damage soybeans, potatoes, root crops, cabbage, and beans. While soybeans and small grains are attacked, high seeding rates and an ability to compensate for stand loss mean serious losses are less common.

Biology
While many different species of wireworms can attack cultivated crops, their biology is similar. The larvae are commonly identified to species by differences in the ornamentation of the last segment of the abdomen. Most overwinter as larval and adults stages in the ground. In the early spring the adults, called click beetles, become active. They are usually brown, streamlined beetles, with the body tapering toward the rear. The joint between the thorax and the abdomen is loose and flexible, and when the beetles are placed on their backs, they snap their abdomen against the ground to toss themselves several inches into the air to flip over.

The females lay their eggs around the roots of grasses. The adults live 10 to 12 months spending most of the time in the soil. While the eggs hatch in a few days to a few weeks, they require 2 to 6 years in the soil feeding on the roots of grasses and other plants to complete development. Wireworm larvae migrate upward and downward in the soil depending on soil moisture, so that it is often hard to find them in dry summer weather, even in severely infested fields. The larvae pupate in cells in the ground in the late summer or fall, and the adults remain there until the following spring. All stages and nearly all sizes of larvae may be found in the soil at one time.

Serious infestations are usually localized to a single field or portions of a field. Certain species of wireworms are abundant only in poorly drained soils. The proper draining of such soil will prevent damage by these species.

Management
Wireworms are most often a problem in fields that have been in sod for many years, particularly bluegrass sod. These fields may have populations of wireworms that can cause damage to corn, soybeans and some vegetables. With wireworms, there is no rescue treatment once symptoms of damage is observed. Stand counts will help to determine whether or not it is advisable to replant all or parts of damaged fields. A soil insecticide should be used when replanting.

Evaluating new fields for the potential for wireworm or grub problems is very difficult. The type of soil will, in part, determine the types of soil insects present. Where CRP land is returning to production, producers should consider planting soybeans or small grains as the first crop. High seeding rates and compensation for stand loss makes these better choices than corn.

Solar bait stations can be used to test for wireworms prior to planting corn. Two stations are recommended per acre. Bait stations are made by digging a hole 4 inches deep and about 9 inches wide. Place ½ cup of
untreated corn-wheat mixture in the bottom of the hole, then fill the hole with loose soil. Do not pack the soil. Cover the area with plastic. This will help the seeds to germinate quickly and be attractive to wireworms even when soil temperature are still cool. Gases produced by the breakdown of the corn-wheat mixture attract wireworms to the station.

Stations should be set at least 3 weeks before your planned planting date. The stations are checked two weeks later by digging up the bait and searching through the seeds for wireworms. Note any white grubs you find while establishing and checking wireworm bait stations. An average of one wireworm per bait station would suggest that a soil insecticide be used at planting.

Soil insecticides are recommended at planting for corn where the risk of wireworm damage is high. Liquid and granular formulations are registered for wireworm control for many crops. For high value crops such as tobacco and potatoes, the best results are obtained with broadcast and incorporated treatments. While more expensive than in the row treatments, broadcast and incorporated liquid applications should provide even coverage of the field and good wireworm control. With corn, a reasonable trade off between cost of application and control is when the insecticide is placed directly in the seed furrow. While banded or infurrow treatments may not provide the same level of control, they are much less expensive that broadcast treatments. When using a broadcast incorporation, insecticides should be applied after soil temperatures are above 50°F. For tobacco, treat the field at least 10 days prior to setting tobacco to allow sufficient time for the insecticide to take effect before setting the plants in the field. For a list of wireworm insecticide treatments see ENT-16, Insecticide Recommendations for Conventional & No-tillage Corn, and ENT-15, Insecticide Recommendations for Tobacco Fields and Beds. Follow label directions on incorporation.