Seedling Insects

Cutworms and seed corn maggots both cause issues with stand establishment. Generally, these insects are destructive on early plant development. Once the corn gets to the four to six leaf stage, the plant can outgrow any damage. Both of these insect pests can also cause issues with soybean stand establishment.

Black cutworm moths fly up from southern states and tend to lay eggs in weedy areas. No-till fields along river bottoms are high attraction areas for them. The eggs then hatch and, depending on the timing of planting, will feed on weeds or early germinating corn or soybeans. They feed at night and during the day burrow in cracks near the plants. This is why an in-furrow application works so well because the pest burrows into the treated zone for protection from sunlight. The threshold is 3 percent cutting below the growing point. If targeting wireworm and grubs, use a product that will also control cutworms.

Seed corn maggots are generally a problem in cool, wet conditions on manure fields or fields with decaying vegetation i.e., weeds or cover crops. Stand loss occurs from larval feeding on the seed. There is no rescue option for this pest. FMC’s products for wireworm and grub control will also control seed corn maggots.
Wireworms and grubs cause damage in two areas of production. They can feed on the seed or seedling causing stand loss. They can also feed on the root systems throughout the summer causing a reduction in nutrient uptake, water uptake and vigor loss within the plant.

Example: Stand loss due to wireworms in NE. Corn following soybeans. Capture® LFR insecticide on right, untreated on left.

Example: Root feeding in VA. Grub damage. Capture LFR insecticide on left, untreated on right.

May/June beetles, Masked chafer and Japanese beetles all lay eggs that hatch into grubs. May/June beetles are two to three year life cycles while the other two are annual grubs. These pests have become more of an issue since we moved planting dates into April, allowing these larva to feed in April, May and June. The perennial grub feeds even longer, plus the next generation feeds in August and September on late-planted corn before it finishes ear development. These grubs are also not very picky on their food source and will also damage soybean roots occasionally. Threshold is two grubs per cubic foot of soil. No known rescue treatments. Soil insecticides are the most effective option.

Wireworms are the larval form of the click beetle. There are many species of wireworms, and they can take four to seven years to become adults so they can damage successive crops. They can feed on seeds and young plants causing death. They can also feed on the fine hair roots diminishing the effectiveness of nutrient and moisture uptake. The photo above in NE shows how wireworm can wipe out a stand of corn when severe infestations occur. No known rescue treatments. Long residual soil insecticides are the most effective option. Threshold is one wireworm per bait station.
Managing and Understanding Seedling Insects in Corn and Soybeans

Field Corn – drought year 2012
Boonville, MO – larger roots, greater yields

Capture® LFR® insecticide 184 bu/A
Untreated 148 bu/A

Soybeans Tuscola, IL Commercial Field
+7.2 BU ROI = $15.20/A 3.50/bu soybeans

Ring Farm

- Untreated
- Capture® LFR insecticide
FMC Seedling Disease Control Options

While protecting insects, utilize one of our Ethos® insecticide/fungicide products to help manage Pythium, Fusarium, Rhizoctonia and Phytophthora

Ethos XB and Ethos® 3D insecticide/fungicides contains a specific strain of *Bacillus amyloliquefaciens*, a naturally occurring organism with fungicidal properties

- Antifungal lipopeptides form during fermentation.
- Additional lipopeptides produced as spores germinate and colonize.
- Biofilm colonizes root hairs, grows along with the root structure, building a defensive barrier to infection from pathogens.
- Seedlings emerge more uniformly and with the vigor to optimize productivity.
- A key component of early root colonization is spore inoculation.
- At the 6.8-oz. rate of product, roughly 2 trillion spores are delivered per acre.

Commercial field in central MO, Ethos XB insecticide/fungicide on right. Bifenthrin-only treatment on left showing stand loss from disease.
Two platforms of products.

LFR® products are designed to mix and stay suspended evenly in starter fertilizer applied in furrow.

3RIVE 3D® products are designed for quicker planting and less potential exposure to the operator.

FMC Seedling Insect Control Options

Apply Capture® LFR® insecticide at 4 oz./A with 5-7 gallons of starter fertilizer or water in furrow. Apply Capture® 3RIVE 3D® at 4 oz./A with 36 oz of water/A through the 3RIVE 3D delivery system.

FMC Seedling Insect and Disease Control Options

Apply Ethos® XB insecticide/fungicide at 4 oz./A with 5-7 gallons of starter fertilizer or water in furrow. Apply Ethos® 3D insecticide/fungicide at 4.5 oz./A with the new 3RIVE 3D equipment. State registrations for Ethos® 3D insecticide/fungicide are pending. This is not an offer to sell, or any promotion for sale, in any state where FMC has not obtained such state registration. Contact your local FMC representative for details and availability in your state.

Capture 3RIVE 3D insecticide, Capture LFR insecticide, Ethos XB insecticide/fungicide and Ethos 3D insecticide/fungicide are Restricted Use Pesticides. Always read and follow all label directions, restrictions and precautions for use. Some products may not be registered for sale or use in all states. Please contact your FMC representative for information regarding current state registrations. FMC, 3RIVE 3D, Capture, Ethos, LFR and Hatch Trak are trademarks or service marks of FMC Corporation or an affiliate. ©2018 FMC Corporation. All rights reserved. 8/18