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Don't Let Cover Crops Be a "Green Bridge" to Pests & Disease-aster

by Stephanie Porter, Sales Agronomist

The incorporation of cover crops on your farm increases species diversity; therefore, depending on cover crop species, it can lead to beneficial species that provide pest suppression. Thus far, the pest greatest suppressed by cover crops appears to be weeds. Other cover crop suppression studies in corn have shown lower rootworm numbers with slender wheatgrass or a reduction in corn borer thanks to inter-seeded red clover.

In soybeans, some reported less bean leaf beetle or soybean aphids after cereal rye. Due to the alarming economic impact of soybean cyst nematodes (SCN), many continue to research the effects of grass cover crops or wheat as pest starvers. However, for some time, it was thought that some legume cover crops could harbor SCN. Recent Iowa State research is ongoing, but has found that many legume cover crop species are poor hosts or non-hosts for SCN.

Pests such as wireworm or seed maggot infestation could increase due to cover crops, but these can be prevented by insecticidal seed treatments such as PowerShield®. Some cover crops are said to be "green bridges" for pests such as armyworm and black cutworm. Termination of the cover crops 10 to 14 days before planting corn can prevent pest attack. However, scouting, understanding pest lifecycles, and determining pest thresholds are a must to determine if a rescue insecticide treatment is needed, especially if you have planted a non-traited corn hybrid.

Don't be too quick to turn to insecticides for all the answers because they can kill beneficial insects such as those that eat slugs, another major pest found in crops planted after a cover crop. Be very cautious, but recent research says to plant green, meaning no-till planting into the actively growing cover crop, in soybeans to prevent slugs because slugs favor environments such as moist, warm dying cereal rye cover crop. However, don't rely on slug bait as your only management tactic, especially if it is going to rain, because this tactic may not be economical, and nitrogen solutions may need to be repeated because they lack residual control. An integrated approach of earlier planting dates, closing seed slot, and residue management is preferred to help prevent slug devastation.



Armyworm found in corn because it was "planted green."

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Lastly, cover crops are said to reduce some disease. Increased stand and reduction in rhizoctonia root rot lesion size was reported after cereal rye in some Iowa State experiments. The main issue appears to be that cover crops such as alfalfa, crimson clover, pea, and hairy vetch can be hosts to the fungal pathogen that causes sudden death syndrome (SDS). The good news is false flax, millet, mustard, oat, rye, ryegrass, triticale, and wheat were found to be non-hosts of SDS. Another study provided no evidence that rye could be used to help manage SDS in soybeans.



Account Manager Lance Brillion takes stand counts in soybeans with a cover crop.

Although some think it is overrated, many have reported a yield reduction when corn was planted after winter rye. [Iowa State researchers recently discovered that winter rye was a host of the same seedling pathogens as corn.](#) A reduction in Pythium root rot infection was observed when winter rye was terminated 14 to 21 days before planting. When winter rye roots died, Pythium spp. increased in the soil, thus proving rye could be a “green bridge” for pathogens to corn, which emphasizes the need for fungal seed treatment components in PowerShield and PowerShield® SDS.

There is no denying that cover crops can change the ecosystem for the better on your farm. Cover crop benefits can be hard to measure, especially in the short term, so don't let pests or diseases deter you from cover crop success. Many making a long-term cover crop commitment on their farm are reaping environmental benefits. There is still much we don't know, but as research continues, it is important to use a diverse mix of cover crop species ahead of a crop, be educated, use multiple tactics, and “allow a brown period,” especially before corn is planted.

Questions or comments for our agronomic team?

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