



SPRING COVER CROP REMINDERS

Cover crops typically mean additional residue in spring, which brings about additional management considerations, detailed below.

PEST CONTROL

Cover crops and green manure can harbor insects, diseases and nematodes harmful to subsequent cash crops. Armyworms, cutworms and other pests present additional management considerations after grass cover crops (i.e., annual ryegrass), cereal grains and even legumes (crimson clover, hairy vetch) due in large part to soil surface residue

Armyworms

Armyworms can lay eggs in grassy cover crop fields, and young caterpillars attack corn mid-spring through early summer. Armyworms also move into corn from surrounding wheat fields, causing damage primarily along field edges.

There are labeled armyworm insecticides available and many growers include this with burndown application, however, armyworm populations may not yet be sufficient to warrant the cost.

Instead, scout fields often after corn planting. While it may be difficult to find armyworms, inspecting their damage is easier. Refer to local threshold recommendations to determine if and when to apply insecticide (foliar applications have proven successful).

Slugs & Voles

Slugs and voles may increase with introduction of cover crops and no-till. Many growing practices that leave surface residue can lead to enhanced habitat for these pests. For growers practicing no-till or reduced tillage, have solutions that don't result in added deep tillage (minimal tillage may be necessary in some situations).

Below are steps to help cover croppers minimize occurrence of slugs and voles, especially in fields where it's been a problem previously:

- Plant cash crop early. Faster establishment = less feeding from slugs as crop will be too large to feed.
- Keep roadsides & ditches/waterways mowed. This will decrease vole protection, especially when breeding is heavy and numbers are growing.
- Control or terminate cover crops 3-4 weeks before planting to decrease residue.
- Ensure seed slot is closed and firm. This will reduce direct feeding on the seed (may require deeper seed placement than usual).

Early cover crop termination and residue management at planting can reduce risk of pest damage. Insecticide may be required if planting into standing cover or within 3-4 weeks of termination. However, remember that surface residue creates a more diverse soil ecosystem versus conventional tillage systems and often attracts beneficial insects too. For nematodes and diseases, select products to meet your goals, plan early and manage accordingly.

NITROGEN

How much and when nitrogen (N) will be available after grass cover crops is a common question with no easy answer. The rate and extent of N release from decomposing grass cover crops depend on many factors, including plant stage at termination, carbon to nitrogen (C:N) ratio and weather.

Plants in the vegetative stage have higher N concentration than those in the reproductive stage and decompose faster. The C:N ratio determines timing of N release from these residues. High C:N cover crop residues (>25:1) will first use and deplete N from soil or recent fertilizer N additions. Only after some time will N begin to release back to the soil.

For grass cover crops, terminate in the vegetative stage if the following cash crop is a grass, such as corn. If the cover crop reaches the reproductive phase before termination, more N will be used after termination and an additional starter N fertilizer application will be needed. ***This is crucial for the health of newly seeded cash crops.***

Not all N scavenged by the cover crop will be available the next season, so fertilizer N rate should not be reduced by the amount of N kept from leaching (some scavenged N goes toward building soil organic matter). Grass cover crops, while in the vegetative stage, have C:N ratios around

10:1-15:1 and release N rapidly after termination. Roughly 50% of N in the above-ground biomass will be available over a window of 1-2 months, depending on weather.

HERBICIDE RESTRICTIONS

Pesticides used now on cash crops can still impact cover crop establishment later – especially if cover crops are seeded prior to harvest. When interseeding cover crops it's important to follow pesticide guidelines; those herbicides can affect cover crop germination, and established cover crops within the cash crop will alter the chemical options one can use. The industry continues to use information from several universities, listed below. We strongly encourage keeping these close:

University of Wisconsin: <http://bit.ly/2pugapH>

Purdue University: <http://bit.ly/2pGUrvS>

Penn State University: <http://bit.ly/2oN43AO>

Iowa State University: <http://bit.ly/1VhrWdK>

University of Nebraska: <http://bit.ly/1oBFdTy>

SEEDING EQUIPMENT

If using seeding equipment from your NRCS or SWCD office, consider reserving soon. It's evident that machinery rental programs are working in many areas. However, most offices will tell you that the earlier they're made aware of equipment needs, the easier it is for everyone coordinating these efforts come late summer.

About The Dirt

The Dirt is a periodic email series with timely cover crop tips from the agronomic experts at Soil First and La Crosse Seed. If you have a question you'd like us to answer, contact us: info@laxseed.com or 800.356.7333

