

COVER CROP PLANTING AND ESTABLISHMENT



COVER CROP TRAINING MODULE

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All photos are by Rob Myers, University of Missouri, unless otherwise noted.



Presentation Outline

- ❑ Type of seeding method used
- ❑ Equipment options
- ❑ Timing of seeding
- ❑ Interseeding options
- ❑ Avoiding problems with residual herbicides
- ❑ Impacting survival of winter annual cover crops

What Planting Method Will Be Used?

- Traditionally, most cover crop seed has been drilled or broadcast-seeded. When broadcasting:
 - the larger the seed, the harder it is to get good seed-soil contact, so more important to rough up the soil surface, and possibly roll or press the seed into the soil after broadcasting
 - aerial seeding works best with smaller seeded cover crops like radishes, clover and ryegrass than large seeds like Austrian peas
- Precision planters (like a corn planter) can work well for one or two species but not as well for multi-way blends of cover crop seed
- Planting method will often be tied to planting date, and some species are more important to plant early in fall (like radishes) than others (like cereal rye)

Reliable Cover Crop Establishment: Use a Grain Drill



Row Crop Planters and Cover Crops



Photo credit – Rob Myers

Vertical Tillage Tools with Seeders



Photo credit – Rob Myers



Professional Cover Crop Seeding with the CCX 9000 Cover Crop Seeder

- | Seed Placement | Seed Depth | Seed Spacing | Seed Control | Options |
|---|-----------------------------|--|---|-----------------------------------|
| • Seed placed deep in narrow rows | • Customizable | • Precise metering and a 100% seed-to-soil contact | • Metering using gravity with and/or laser metering | • Multiple placement products |
| • Seed only 2-3" in front of the roller | • 100% seed-to-soil contact | • 100% seed-to-soil contact | • Metering using gravity with and/or laser metering | • Precision seed spacing with GPS |
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A Variety of Cover Crop Seeders Now Available



Every Day Counts With Fall Cover Crop Seeding



Photo credit – Steve Groff

Oct 7 vs. Sep 29



Picture taken November 11 by Steve Groff, PA

Seeding Cover Crops while Combining



Getting Cover Crops Seeded Earlier



Photo credit – Rob Myers

Hagie Cover Crop Interseeder

Successful Aerial Seeding

Key factors:

- Timing: wait till cash crop is turning color
- Seed type: small seeds better
- Use a pilot skilled with cover crops



Options for Planting Mid-Summer



Interseeding cover crops in knee high corn – can give them an early start BUT must adapt herbicide program. Success depends on rainfall and cover crop species.

3-in-1 option:

- Seed covers
- Apply liquid N
- Spray for weeds



Other Cover Crop Planting Tips

– Avoiding Residual Herbicide Issues –

Residual herbicides can have a big impact on success in getting cover crops established:

- Plan ahead to make sure residual herbicides are compatible with cover crop being planted
- Cereal rye tolerant of most residual herbicides
- Brassicas such as radish, turnip, and rapeseed tend to be most sensitive to residual herbicides, especially those with broadleaf activity
- Weather conditions will affect how long residual herbicides persist in the soil

Getting Winter Annual Cover Crops to Survive the Winter

If goal is getting cover crop to survive till spring:

- Plant in a timely fashion; some cover crops must be in by early fall to have a chance of surviving the winter
- Match the cover crop to the soil; some species less tolerant of poorly drained conditions, such as Brassicas and some clovers
- Seeding rate can impact survival, especially on Brassicas; don't overseed them
- Having some residue cover or a companion cover crop can help less hardy species survive (like oats with clovers)

Getting started with cover crops
→ Plant cereal rye before soybeans



LGseeds.com

Summary on Establishing Cover Crops

- Getting the cover crop seed established at the appropriate time is key to getting optimum benefit from the cover crop and increasing the likelihood of winter survival
- Successful establishment depends on good seed-to-soil contact and having the cover crop seeds receive adequate moisture, either from being planted down into existing soil moisture or receiving timely rainfall or being irrigated
- Seeding the cover crop before harvest of the cash crop is increasingly an option for many farmers
- If farmers are short on time, hiring an ag retailer, aerial applicator or neighboring farmer to do the seeding can be viable