



WISCONSIN COVER CROP RECIPE

MCCC-119

Post Corn Silage, Going to Soybean: Use Cereal Rye

This publication is intended to provide a starting point for farmers who are new to growing cover crops. With experience, farmers may fine-tune the use of cover crops for their systems.

Introduction

The following recipe provides an introductory approach to integrating a cover crop into a corn silage–soybean rotation.

Planning and Preparation

- **Planning**—Read about cover crops. Go to field days. Start small. Be timely. Prioritize management based on purpose and objectives.
- **Corn hybrid and planting**—If possible, plant the preceding corn silage crop early and use a hybrid within the adapted maturity range for your location.
- **Residual corn herbicides**—Cereal rye can be planted in the fall and produce a successful stand following most spring-applied residual corn herbicides. If cereal rye is to be grazed or harvested for forage, there are some time-interval restrictions. (See Resources.)
- **Seed purchase**—Order cereal rye seed early, usually by early summer. Named rye varieties can produce substantially more growth and have predictable development, but they are usually more expensive than VNS (variety not stated) seed. Use good quality seed from a reputable seed dealer.

Fall Work

- **Corn silage harvest**—Harvest fields where cereal rye is to be planted as early as possible.
- **Fall manure**—Manure applications supplying high rates of nitrogen are not recommended when soybean is the next crop. Small amounts may be permitted. If you need to apply manure, apply it as soon after corn silage harvest as possible and drill-seed cover crops after manure is applied.
- **Tillage or no-tillage**—Generally, it is easier to integrate cover crops into no-till or strip-till systems. If tillage is

necessary to incorporate manure or smooth the seedbed after corn silage harvest, it should take place prior to rye seeding.

- **Timing of planting**—Plant cereal rye as soon as possible after corn harvest and at least two weeks before the average hard frost date (28°F). If planting later than mid-October, consider increasing the seeding rate.
- **Seeding rate**—Seed at a rate of 40–60 lb./acre (assuming a germination rate of 85% or greater). Seeding rates should be increased by 20% if broadcasting and increased by 10% if broadcasting and incorporating. Also increase the rate if the rye will be harvested as a silage crop in the spring.
- **Planting method**—Drill to a depth of 0.75–1.50 inches or broadcast with shallow incorporation to less than 1.50 inches. Aerial or other broadcast seeding is an option for earlier establishment into standing corn with some risk. Harvest should be planned within two weeks of seeding. Overly wet or dry conditions after aerial seeding or presence of slugs will limit success.

Spring Work

- **Termination timing**—Terminate the cereal rye in spring when the plants are 6 to 12 inches tall and actively growing or at least 10 days before planting soybean—whichever comes first. In a wet or windy spring, be ready to take advantage of any break in the weather and/or use low axle weight sprayers. Be familiar with the rules related to termination timing and crop insurance. (See *NRCS Cover Crop Termination Guidelines* in Resources.)
- **Termination herbicide**—Cereal rye can easily be terminated with a full rate of glyphosate (1 lb. acid equivalent/acre) after the rye begins growing in the spring. Effectiveness and rapidity of termination improves if rye is rapidly growing and air temperatures are warmer (> 60°F). Larger rye, rye past the boot stage, or rye sprayed during cooler weather can be more



Figure 1. This cereal rye cover crop was planted near Arlington, WI, after corn silage harvest and fall manure application. (Jaimie West)

difficult to kill, may require higher glyphosate rates, or will die more slowly. Use best management practices for glyphosate to improve effectiveness.

- *Option to harvest cereal rye as a silage crop*—Some growers may be interested in harvesting cereal rye as an additional silage crop. Make sure all herbicide rules are followed. Also, this may delay the planting date of soybean. Any fall-applied nutrients can be counted toward the cereal rye crop in nutrient management planning. (See *Planting Winter Rye after Corn Silage: Managing for Forage* in Resources.) Use a full burndown rate of glyphosate to completely terminate the rye regrowth after harvest. Termination must be done prior to emergence of the subsequent crop for crop insurance eligibility in Wisconsin.
- *Soybean planting*—It is usually easiest to no-till plant soybean into the dead, brown cereal rye cover crop. Row cleaner attachments can sometimes be beneficial to increase soil warming but may plug with cover crop residue if not set up properly. Check planting depth and seed furrow closure shortly after beginning to plant and make adjustments as needed.
- *Scouting after planting*—Scout for soybean emergence, population, and insect pests. Additionally, scout for weeds because substantial cereal rye residue may delay emergence of annual weeds, which may then delay the application of post-emergence herbicides.

Resources

Cover Crop Selector Tool, mccc.msu.edu/selector-tool—available from Midwest Cover Crops Council, www.mccc.msu.edu

Cover Crops 101 (University of Wisconsin–Madison Extension publication A4176), <https://cdn.shopify.com/s/files/1/0145/8808/4272/files/A4176.pdf>

Herbicide Rotational Restrictions for Cover and Forage Cropping Systems (University of Wisconsin–Madison Nutrient and Pest Management publication), https://ipcm.wisc.edu/download/pubsPM/2019_RotationalRestrictions_final.pdf

NRCS Cover Crop Termination Guidelines (version 4, June 2019)—available from the USDA–National Resources Conservation Service, https://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=nrcseprd1467638&ext=pdf

Cover Crops, Manure, and Nitrogen Management (University of Wisconsin–Madison Extension publication A4178), <https://go.wisc.edu/dwx72w>

Planting Winter Rye after Corn Silage: Managing for Forage (University of Wisconsin–Madison Nutrient and Pest Management publication), https://ipcm.wisc.edu/download/pubsNM/Rye_090507_final.pdf

Termination of Winter Rye and Annual Ryegrass Using Glyphosate (University of Wisconsin–Madison Nutrient and Pest Management publication), https://ipcm.wisc.edu/download/pubsPM/AnnualRye_WinterRye_Glyphosate.pdf

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