



United States
Department of
Agriculture

340 Cover Crop – Single Species Winter Cereal Rye Implementation Requirements

Producer: _____

Crop Year: _____

County: _____

Contract #: _____

Field(s): _____

Tract(s): _____



Cover crops are grasses, legumes, and/or forbs planted for seasonal vegetative cover. This Cover Crop IR outlines the use of Winter Cereal Rye as a single species cover crop. This IR will not be used for the development of cover crop mixes. Select the cover crop seeding rates and methods as planned. If a mix is planned with additional species beside cereal rye alone, use the MN seeding calculator.

Gopher State One Call Utility Service 651-454-0002 or 800-252-1166

Practice Purpose* (check all that apply)

- ☐ Reduce erosion from wind and water.
- ☐ Maintain or increase soil health and organic matter.
- ☐ Suppress excessive weed pressures and break pest cycles.
- ☐ Improve soil moisture use efficiency.
- ☐ Reduce water quality degradation by utilizing excessive soil nutrients.
- ☐ Minimize soil compaction.
- ☐ Other:

* Ensure the purposes identified match the resource concerns addressed during planning.

Producer's Goals and Objectives

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Description of Work

- Seedbed preparation, seeding rates, seeding dates, seeding depths, fertility requirements, and planting methods will be consistent with applicable local criteria and soil/site conditions.
- Ensure Cereal Rye is compatible with other components of the cropping system.
- Ensure herbicides used with crops are compatible with cover crop selections and purpose(s).
- Determine the method and timing of termination to meet the grower's objective and the current NRCS Cover Crop Termination Guidelines.
- When a cover crop will be grazed or hayed ensure that cover crop selection complies with pesticide label rotational crop restrictions and that the planned management will not compromise the selected conservation purpose(s).
- Do not burn cover crop residue.
- **Do not harvest cover crops for grain or seed.**

Seeding and Management

☐ A seeding plan has been developed with the following information. See attached seeding plan for details.

Fill in the following table with the appropriate information for each field if alternative seed planning tools were not used.

☐ In lieu of listing information in the table, check box to indicate all fields/tracts will be treated the same.

Field #s	Tract #s	Acres	Seeding rate (lbs/ac)*	Tillage System ¹	Planting Window	Seeding Method	Termination Method
Total acres:							

¹ Reduced, no, and strip tillage require a Soil Tillage Intensity Rating (STIR) < 20.

*To figure Pure Live Seed (PLS) rates, multiply the percent purity by the percent germination. Divide the seeding rate by the percent PLS to find the bulk seed needed per acre.

For example: 98% purity X 60% germination = 0.588% PLS 10 lbs/acre X 0.588% PLS = 17 lbs/acre.

Seeding rates are based on certified seed tags obtained from commercial sources. Bin-run seed can be used, **IF** the seed has been tested for germination, purity, and noxious weed seed by MDA or another accredited seed laboratory **along with** scale tickets provided. Be aware of considerations to remain compliant with the Plant Variety Protection Act and Minnesota State Seed Laws. **Seed must be free from noxious weeds.**

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More information on bin-run seed can be found here: [Bin-Run Fact Sheet](#)

Or use the QR code at right.

Planting Considerations

Minimum PLS seeding rate of single species winter cereal rye cover crop.

Planting Date	Conventional or Reduced Till		No-Till or Strip-Till	
	Incorporated	Non-incorporated	Incorporated	Non-incorporated
July 15 th -October 1 st	40 lbs. / acre	40 lbs. / acre	40 lbs. / acre	40 lbs. / acre
After October 1 st	50 lbs. / acre	75 lbs. / acre	40 lbs. / acre	60 lbs. / acre

- Incorporation = drilling, seeding, or broadcast with incorporation within 48 hours.
- Without Incorporation = broadcast and aerial application
- Single species cereal rye seedlings must be planted by November 1st across Minnesota. Do not seed into frozen ground.
- Planting depth should be set between 0.75 and 1.5 inches. When incorporating seed with light tillage, ensure seed does not surpass 1.5 inches deep.
- To qualify for the no-till seeding rate, STIR value of field management must be below 20.
- The listed rates are minimum seeding rates required for NRCS programs. Multiple situations may warrant recommending higher rates. Be sure to discuss if the chosen rate makes sense for this field and resource concern.
- When cover crop will be utilized for forage along with other resource concerns it is suggested to increase the seeding rate to 90 lbs/ac.

Termination Timing and Considerations

Herbicide up to 2 weeks before planting the following crop is the best option for first time cover crop users, when corn is the planned following crop, or if soil moisture conditions are dry and there is no rain in the 10-day forecast.

Herbicide at time of planting the following crop or after planting but prior to emergence of the following crop is for more experienced cover crop users, for planting soybeans directly into cereal rye, and if moisture conditions are sufficient and rains have been regular throughout the spring. If planting corn into cereal rye, ensure there is enough nitrogen at planting as there may be nutrient tie up.

Roller crimper only successfully terminates cereal rye when it is crimped at anthesis. This means the entire field is in full pollen shed.

Tillage alone does not always terminate a cover crop, especially cereal rye and herbicide may be needed for additional termination. This method must follow all HEL requirements.

Grazing/haying doesn't always result in 100% termination and herbicides¹ may be needed. Ensure that grazing/haying activities do not compromise the integrity of the conservation practice and cause additional resource concerns.

¹Herbicide residues may accumulate in cover crops that may be fed to animals as forage and consumed by humans. Follow rotational restriction on labels when planting cover crops that may be grazed or harvested for forage to avoid illegal residues.

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Field Maps

☐ Field maps are attached.

Management and Soil Amendments (if needed)

☐ Fertilizer or soil amendments for cover crop are required, see attached documents.

Appendix

It is not recommended to till between harvest of crop and planting of the cover crop, however, ensure that crop harvest residue is evenly distributed to allow for maximum cover crop effectiveness.

Be aware that cereal rye can be a host for armyworm, wireworm, penetrans root-lesion nematode, and corn seedling pathogens such as *Fusarium* and *Pythium*.

Be aware of potential herbicide carryover issues for both the cover crop and the following crop. Consider soil type, soil pH, and precipitation patterns on herbicide degradation.

Refer to [Minnesota Agronomy Technical Note 33](#) for further information.

Operation and Maintenance Plan

Evaluate the cover crop to determine if the cover crop is meeting the planned purpose(s). If the cover crop is not meeting the purpose(s) adjust the management, change the species of cover crop, or choose a different technology.

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Practice Specifications Approval and Completion Certification

Provided Practice Cost information

- ☐ Site-specific cost estimate, or specifications for the producer to develop a cost estimate or obtain the bid themselves.

Job Class Information (List Practice Job Class)

340 ESJAA Fact Sheet	Job Class:
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Design Installation and Layout Approval

Designed By:	Date:	Job Approval Authority or Technical Service Provider Number:
Approved By:	Date:	Job Approval Authority or Technical Service Provider Number:

Record of Completion and Check Out Certification

Treated Acres	Date Completed by Client	Date Certified	Approver's Initials

- ☐ Additional documentation to support practice certification is in the Case File.

Certification Statement

I certify that implementation of this conservation practice is complete, meets criteria for the stated purpose(s), and meets the NRCS conservation practice standard and specifications.

Printed Name:	Date:
Title:	Certifier's Job Approval Authority (JAA):
Signature:	

Notes: