Grass
Cereal Rye, Winter
Secale cereale

COVER CROP DESCRIPTION

Most commonly-grown cover crop in the US. Most winter-hardy cover crop. Best winter cover for low-fertility or acid soils. Tolerates wet soil. Winter cereal rye requires vernalization (overwintering) to flower and will likely fail to flower if planted in spring. Best winter cover for many purposes: excellent for biomass, N scavenging, weed control. Good forage, but low quality after heading. Best choice for roller-crimping. Height, biomass, high C:N ratio at maturity may hinder the growth of a following non-legume cash crop. Potential weed if it sets seed, especially in small grain cash crops. Mixes well with legumes. Can plant later than any small grain, but goes to head early in spring – only barley is earlier.

Cereal Rye, Winter - Ackroyd [2020]

Cereal Rye, Winter - Bjorkman [2020]

Cereal Rye, Winter - Ackroyd [2020]

GOALS

Growing Window	Medium
Nitrogen Scavenging	▰▰▰▰▰
Lasting Residue	▰▰▰▰▰
Prevent Fall Soil Erosion	▰▰▰▰▰
Prevent Spring Soil Erosion	▰▰▰
Forage Harvest Value	▰▰▰▰
Penetrates Plow Pan	▰▰▰
Reduces Surface Compaction	▰▰▰▰
Improve Soil Organic Matter	▰▰▰
Increase Soil Aggregation	▰▰▰▰
Good Grazing	▰▰▰
Pollinator Food	▰

WEEDS

Residue Suppresses Summer Annual Weeds	▱
Outcompetes Summer Annual Weeds	▰▰
Suppresses Winter Annual Weeds	▱
Persistence	▰
Volunteer Establishment	▰▰▰▰

ENVIRONMENTAL TOLERANCES

Low Fertility	▰▰▰▰▰
Drought	▰▰▰▰
Heat	▰▰
Shade	▰▰▰
Flood	▰▰
Salinity	▰▰

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Growth Traits

Duration	Annual
Zone Use	Common
Shape And Orientation	Erect
Dry Matter (Lbs/A/Yr)	1500 - 6000
Soil Texture	Coarse
	Medium
	Fine
Soil pH	4.5 - 8.2
Soil Moisture Use	
Hessian Fly Free Date?	No
Ease Of Establishment	▮▮▮▮▮
Establishes Quickly	▮▮▮▮
Early Spring Growth	▮▮▮▮▮
Flowering Trigger	Vernalization
Root Depth	Medium

Soil Drainage

- Very Poorly Drained
- **Poorly Drained** ●
- **Somewhat Poorly Drained** ●
- **Moderately Well Drained** ●
- **Well Drained** ●
- **Excessively Drained** ●
- **Saturated Muck** ●
- **Well Drained Muck** ●
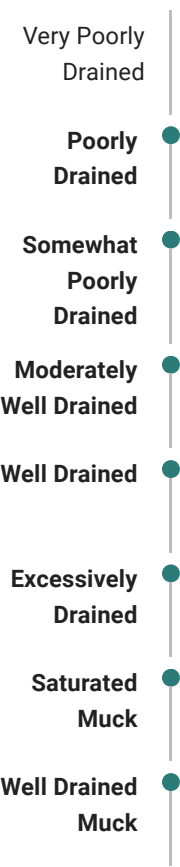
Planting

Seeds Per Lb	
Seed Price Per Lb	💲💲💲
Base Seeding Rate (Lbs/A)	75 - 150
Drilled Depth	0.75" - 1.5"
Can Aerial Seed?	No
Can Frost Seed?	No
Min Germination Temp (°F)	34

Termination

Tillage At Vegetative	▮▮
Tillage At Flowering	▮
Freezing At Vegetative	▮
Freezing At Flowering	
Chemical At Vegetative	▮▮▮▮▮
Chemical At Flowering	▮▮▮▮▮
Mow At Flowering	▮▮▮▮
Roller-Crimp At Flowering	▮▮▮▮▮

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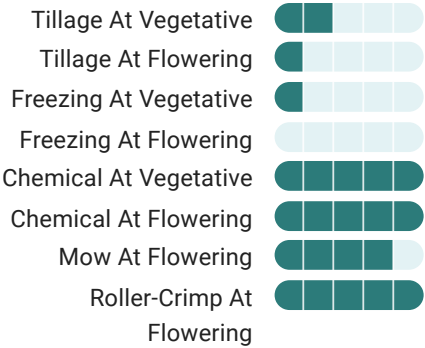
PLANT HARDINESS ZONE 4 DATASET

Planting and Growth Windows

🔵 Frost Seeding	N/A
🟢 Reliable Establishment	08/15 - 09/30
🟡 Temperature/Moisture Risk	10/01 - 10/15
🟢 Active Growth Period	Fall
	Spring
Winter Survival	Expected
Can Interseed	N/A

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
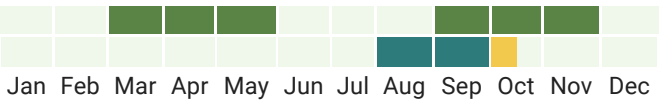
Extended Comments

Planting: If you are planning to use as a mulch for following crop you need to seed at the high end of the recommended rate.

Weeds: Can become a weed if tilled at wrong stage; Best if killed early; Not recommended before corn; Mow-kills after heading

Forage and Grazing: Can be lightly grazed in the fall and again in the spring, or harvested in the spring as ryelage.

Insects: Use as a winter crop and terminated in early or late spring has no impact on arthropods in a subsequent soybean crop

Termination: Roller-crimping is less effective on sparse stands.

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References & Resources

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