

Cereal rye is the workhorse small grain cover crop in the Piedmont, Mountains and Ridge & Valley. It produces the most biomass of the small grains. In conservation tillage systems, it is excellent for summer weed suppression when allowed to reach milk stage. It also suppresses root-knot nematode pressure. Cereal rye should not be planted before cash cereal crops.

Recommended Varieties

Variety	Reasons Why	Source
Wrens Abruzzi	Cheap, easily available, good biomass, few diseases.	
Winter Grazer	High biomass.	
Elbon, Maton, FL 401	Elbon is a recommended variety from Georgia Statewide Variety Trials. Maton is an older variety that has good yields in Georgia Statewide Variety Trials. Florida 401 is very early maturing variety.	Gaskin unpublished data
Bates, Bates RS4, Maton II, Oklon	These varieties have similar performance in OK to those listed above.	Noble Research Institute

Planting Information

Information	Comments	Source
Drilled Seed Depth (inches)	¾ - 2	Managing Cover Crops Profitably
Drilled Seeding Rate (lbs/acre)	60 - 100 Higher rate may be needed in conservation tillage systems for sufficient biomass to suppress weeds in following cash crop.	Managing Cover Crops Profitably
Broadcast Seeding Rate (lbs/acre)	90 - 120 Rye has the highest likelihood of broadcast seeding success of any of the small grains. Sufficient rainfall or irrigation is needed to promote germination. Broadcasting before cotton defoliation has worked for many farmers.	GA and SC county agent/farmers – personal communication, Managing Cover Crops Profitably
Aerial Seeding Rate (lbs/acre)	150 Rye has the highest likelihood of aerial seeding success of any of the small grains. Very dependent on favorable weather for success.	USDA Cereal Rye Plant Guide

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Termination Information

Information	Source
<p>Cereal rye can be terminated by mowing, rolling & crimping, herbicides, tillage, high density grazing and combinations of these practices. Termination timing depends on goals. For weed suppression, cereal rye should be terminated at milk to soft dough stage. To reduce potential nitrogen immobilization, cereal rye should be terminated before flowering (anthesis). When planting cash crop into cereal rye residue, wait at least two weeks after termination so that the residue is dry and crispy. Some farmers plant into green cereal rye and spray an herbicide as they plant or shortly afterward. This may increase risk of cut worm damage.</p> <p>Consult your local Extension and state Pest Management Handbook for herbicide recommendations. Always follow the herbicide label.</p>	<p>USDA Cereal Rye Plant Guide</p>

Cultural Traits

Traits	Comments	Source
<p>Typical Dry Matter Range (lbs/acre) 3,000 - 8,000</p>		<p>Managing Cover Crops Profitably (modified by research data from Piedmont and Ridge&Valley)</p>
<p>Typical Total N Range (lbs/acre) 25 - 50</p>	<p>These values are for total N in cereal rye aboveground biomass is due to N scavenging. N in cereal rye residue is not available during following growing season. Early termination may provide a small amount of N to following cash crop. Late termination can cause N immobilization due to high C:N ratio.</p>	<p>Managing Cover Crops Profitably</p>
<p>Life Cycle Cool season annual grain</p>		<p>Managing Cover Crops Profitably</p>
<p>Growth Habit Upright</p>		<p>Managing Cover Crops Profitably</p>
<p>Preferred Soil pH 5.0 - 7.0</p>	<p>Cereal rye is more tolerant of acidic soils than oats or wheat. It is more adapted to sandy soils than other small grains.</p>	<p>Georgia Forages, Managing Cover Crops Profitably</p>
<p>Relative Costs (\$/acre) \$\$\$</p>		<p>Based on survey of seed costs using maximum price and max seeding rate</p>
<p>Min. Germination Temp (F) 34°</p>	<p>Cereal rye is best choice for late planting as it grows at 5 degrees lower temperatures than other small grains.</p>	<p>Georgia Forages, Managing Cover Crops Profitably, Noble Research Institute</p>
<p>Cautions</p>	<p>High biomass can cause temporary nitrogen immobilization. An additional 20 to 30 lbs N/acre at planting will alleviate this.</p>	

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Sources:

Georgia Forages:

<http://www.caes.uga.edu/extension-outreach/commodities/forages/species-and-varieties/cool-season/rye.html>

Jimmy Carter Plant Materials Center Annual Reports:

https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ga/plantsanimals/?cid=nrcs144p2_022076

Managing Cover Crops Profitably: <https://www.sare.org/Learning-Center/Books>

USDA Cereal Rye Plant Guide:

https://plants.usda.gov/factsheet/pdf/fs_sece.pdf