

PLANT HARDINESS ZONE 7 DATASET

COVER CROP DESCRIPTION

Also sometimes known as Italian ryegrass. Establishes well in tough conditions. Tolerates wet soils better than small grains. Not good in heat or drought. Winter-hardiness can vary - select cultivar accordingly. Dense fibrous root system, top soil conditioner, good weed fighter and N scavenger, top-quality forage. Needs N fertility for high biomass. One of the best cover crop species for interseeding due to ease of establishment under droughty conditions, shade tolerance, and short stature. Annual ryegrass is a key weed in small grains. Do not allow to set seed. Can be hard to terminate in the spring with herbicides and other methods; successful termination dependent on crop growth stage and application timing. Blends of annual ryegrass that mature at different times will make termination more difficult. Mixes well with crimson clover. Shorter than small grains with a lower C:N ratio.





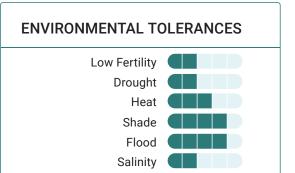
Ryegrass, Annual - Ackroyd [2020] Ryegrass, Annual - Ackroyd [2020]

GOALS

Growing Window Short Nitrogen Scavenging Lasting Residue Prevent Fall Soil Erosion Prevent Spring Soil Erosion Forage Harvest Value

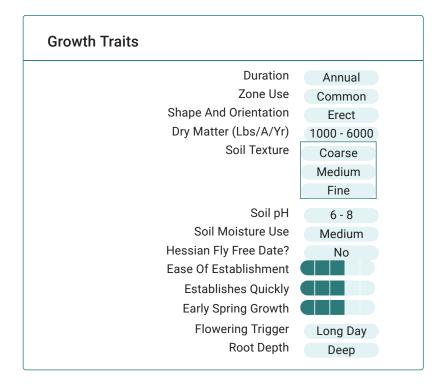
Penetrates Plow Pan **Reduces Surface Compaction** Improve Soil Organic Matter Increase Soil Aggregation **Good Grazing** Pollinator Food

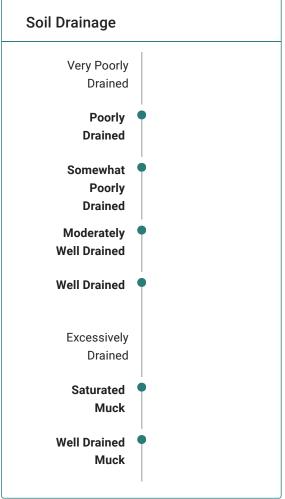
WEEDS Residue Suppresses Summer Annual Weeds **Outcompetes Summer Annual Weeds** Suppresses Winter Annual Weeds Persistence Volunteer Establishment

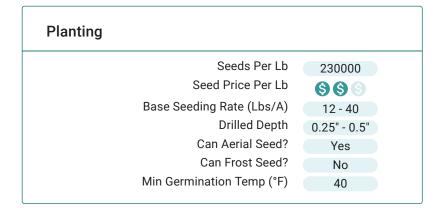


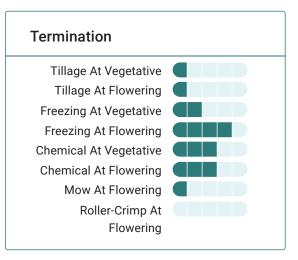


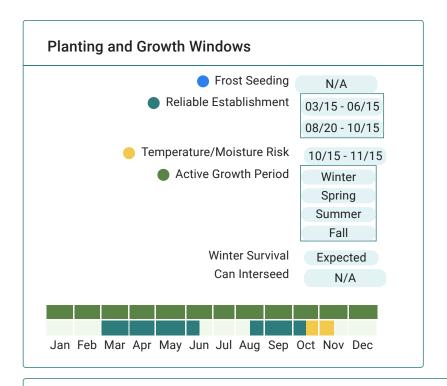
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Extended Comments

Goals: Italian ryegrass is a biennial; needs vernalization to set seed and reliably winter kills in some areas, hence the nickname "annual ryegrass." There are true annual ryegrasses: these are called Westerwolds. They do not have a vernalization requirement to set seed, so management is needed to prevent volunteers. Cultivar matters hugely when using ryegrass as a cover crop because it affects the likelihood of winterkill and how challenging it will be to manage in rotation.

Nematodes: Host for root-knot and sting nematode

Taxonomy: Scientific name quandry! Lolium multiflorum deprecated: https://www.calflora.org/cgi-bin/species_query.cgi? where-taxon=Festuca+perennis

Termination: Herbicide resistance has been documented in annual ryegrass. If using tillage, multiple passes may be necessary. Mow to 6" height to improve likelihood of winter survival.

Weeds: If mowing, leave 3-4" to ensure regrowth; Must be killed before it joints or after heading

Forage and Grazing: Breeding efforts in Europe to make Italian ryegrass more winterhardy because it is FANTASTIC forage. This makes it difficult to manage as a cover crop if the farm has no livestock to feed it to.

Environmental Tolerances: Does very poorly under low-N conditions like most grasses.



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References & Resources

Spring Planted Cover Crops for Vegetable Rotations, University of Delaware Cooperative Extension

Pasture and Hay Seeding Rates, West Virginia University Extension Service

Cover Crops and Green Manure Crops - Benefits, Selection, and Use, Rutgers Cooperative Research and Extension

<u>Cover Crops</u>, University of Massachusetts Extension

Cover Crops and Green Manures (New England Vegetable Management Guide), University of Massachusetts Extension

<u>Late Season Cover Crops</u>, University of Massachusetts Extension

Spring Management of Overwintering Cover Crops - Don't Wait!, Cornell University Cooperative Extension

<u>Cover Crops for Conservation Tillage Systems</u>, Penn State Extension

Special Cover Crop Control Considerations, Penn State Extension