



Annual Ryegrass

Lolium multiflorum

Annual ryegrass, also called Italian ryegrass, is a turf grass with a dense, shallow root system. The extensive root system of this cover crop tolerates compacted soils and makes it an effective catch crop for excess nitrogen. Its many benefits include erosion control, improvement of aggregate stability, and minimization of soil compaction, which is useful in high traffic areas. It can also be used as a nurse crop with fall-planted legumes, such as clover. Annual ryegrass grows vigorously enough to out-compete late summer annuals as well as winter annuals that start in the fall. Ryegrass will tolerate a wide range of soils but performs best on loam soils with high fertility.¹ Rapid, dense growth will suppress weeds in 4-6 weeks and will provide winter cover. These attributes make annual ryegrass an effective management tool in vegetable crop rotations.



Land preparation

Annual ryegrass is a good cover crop choice on heavier ground. A rapid start depends on adequate soil moisture² and a well-drained, clod and weed-free seedbed. There is often sufficient residual nitrogen after vegetables. However, if there is not sufficient nitrogen, 30 lb/ac of nitrogen can double the fall growth of ryegrass.

Seeding rate

Drill at 10- 20 lb/ac, or with Brillion seeder.
Broadcast at 20-30 lb/ac and cover with ½ inch of soil.³
When blending with clover, use 2/3 annual ryegrass and 1/3 clover. Plant at 15-25 lb/ac.⁴

Seeding date

Early spring through late summer. Avoid seeding this cover crop during hot, dry weather. Annual ryegrass can be interseeded between or over established vegetable crops. Broadcast seed when conditions are moist and before the canopy fills in. Plant in fall as a winter cover or as a nurse crop for clover.

Seed sources

Local, Seedway, Ernst Conservation Seeds. Annual ryegrass is produced in Oregon. For a list of seed dealers providing varieties suitable for cover crops see www.ryegrass.com/dealers.

Maintenance

Mow for appearance, or to kill broadleaf seedlings. If fall-planted with legumes, mow to prevent the legumes from being smothered.¹

Björkman, T. and J.W. Shail. 2008. Cornell cover crop guide for annual ryegrass. Cornell University. 2pp. Ver. 1.080324

Control

Annual ryegrass will mostly overwinter, especially where there is good snow cover. Southern types such as Gulf will winter-kill; Midwestern types will survive.⁵ The variety is often not specified for the New York market.

A concern with annual ryegrass is preventing it from going to seed in the spring. Annual ryegrass volunteers are particularly undesirable in small grains, so special care must be taken if those are part of your rotation. It can be controlled with tillage or herbicides.

When tilling in spring, plow under and disk as soon as conditions permit.⁶

The timing of herbicide applications is important to control ryegrass. Apply glyphosate at 3 pt/ac when the grass is 6-9 inches tall, day temperatures are greater than 50°F, and the weather is sunny. A second or third application may be necessary to burn down ryegrass. Simazine can be added to the tank mix but requires rain to activate; Atrazine should not be tank-mixed with other herbicides. Apply 14-21 days after the glyphosate. Atrazine also needs rain to activate.⁷

Sethoxydim can be used on smaller ryegrass when temperatures exceed 40°F

Tips

Heavily crusted soil at planting time will inhibit growth, resulting in gaps in the carpet of grass. August-seeded annual ryegrass makes a dense carpet of sod by the spring. This is valuable for improving soil health and for nitrogen scavenging. It takes some time for decomposition after spring tillage. For additional information, see <http://www.ryegrasscovercrop.com/>.

Ryegrass is susceptible to crown and brown rust (*Puccinia* spp.).² Resistant varieties include Passerel Plus and Marshall.⁸

¹ Ryegrass, Soil Health Series, Fact sheet #13, Rodale Institute Research Center, 1993.

² Dan Towery phone call

³ Clark, A. 2007. Managing Cover Crops Profitably, 3rd ed., Sustainable Agriculture Network. p.70.

⁴ The New Farm's Cover Crop Guide, Bob Hofstetter, P. 5, 1988.

⁵ Dan Towery phone call

⁶ <http://www.sarep.ucdavis.edu/>

⁷ www.ryegrasscovercrop.com

⁸ http://www.penningtonseed.com/section/forage_02.asp?type=articles&id=743