

Grasses

# Annual Ryegrass

## AS A COVER CROP IN OHIO

This fact sheet summarizes information specific to Ohio that is available from the Midwest Cover Crops Council. For more information, see the *Midwest Cover Crops Field Guide, Third Edition*, and the Cover Crop Selector Tool found at: [midwestcovercrops.org/selector-tool/](http://midwestcovercrops.org/selector-tool/)



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### *Lolium multiflorum*

#### Identification Information

- Glossy leaves, unlike cereal rye
- Clasping, clawlike auricles
- Red-tinged leaf sheaths

#### Cultural Traits

- Winter annual
- Minimum germination temperature: 40°F
- Reliable establishment window (state average):  
Mar. 29–Apr. 28; July 25–Sept. 28
- Upright growth habit: 12–24 inches
- Preferred soil pH: 6.0–7.0

**Shade tolerance:** Very good

**Flood tolerance:** Very good

**Winter survival:** Expected

- Winter hardiness varies between varieties.
- Snow cover may enhance survival.

Individuals participating in financial assistance programs are required to follow NRCS Appendix A regarding seeding rates and dates. Failure to do so will jeopardize payments. Appendix A can be found in Ohio's Field Office Technical Guide, Section 4, Ecological Sciences Tools: <https://efotg.sc.egov.usda.gov/#/state/OH/documents/section=4&folder=-6>

#### Planting Information

- Drilled at ¼–½ inches
  - 12–20 lbs./acre (pure live seed)
- Broadcast with shallow incorporation
  - 14–22 lbs./acre (pure live seed)
- Broadcast without incorporation
  - 18–24 lbs./acre (pure live seed)

#### Additional planting information:

- 190,300 seeds/lb.
- If manure is applied, tend toward lower end of the seeding rate.
- Broadcasting without incorporation is usually less dependable than drilling or broadcasting with incorporation.

#### Performance

- Dry matter = 1,000–4,000 lbs./acre per year
  - Biomass quantity is highly dependent on planting/termination dates and precipitation.
  - Planting after wheat often provides relatively low biomass.

**Nitrogen scavenger:** Excellent

**Soil builder:** Excellent

**Erosion fighter:** Excellent

**Weed fighter:** Very good

**Grazing:** Excellent

**Quick growth:** Excellent

**Lasting residue:** Good

**Mechanical forage harvest:** Very good

**Cash crop interseed:** Very good



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## Termination Information

- Tillage
  - If terminating with only tillage, multiple passes are often required.
- Chemical
  - Two or more applications may be required to chemically terminate.

## Additional termination information:

- Annual ryegrass is difficult to terminate and is generally **not recommended** except for specific uses and by highly experienced producers.
- Terminate at 6–8 inches.
- To ensure complete termination, follow best spray practices, and do not plant a mix of varieties.
- Mowing after heading may terminate.
- Annual ryegrass has the potential to develop herbicide resistance.
- Follow NRCS guidelines for cover crop termination dates for crop insurance compliance.

## Additional performance information:

- Potential for herbicide resistance
- Rapid establishment
- Heavy nitrogen and water use in spring
- Early planting results in heading
- Excellent deep, fibrous rooting plant
- Can accumulate nitrates under certain conditions
- Difficult to dry for hay
- May be less effective at reducing marehail than barley or cereal rye
- Non-host for root knot nematode, soybean cyst nematode, and sugarbeet cyst nematode
- Reported to reduce clubroot in cabbage

## Potential Advantages

### SOIL IMPACTS

<b>Subsoiler:</b>	Excellent
<b>Frees P and K:</b>	Very good
<b>Compaction fighter:</b>	Excellent
<b>Disease:</b>	Good
<b>Allelopathic:</b>	Good
<b>Chokes weeds:</b>	Excellent

### OTHER

<b>Short windows:</b>	Excellent
<b>Bears traffic:</b>	Excellent
▪ Rapid establishment	

## Potential Disadvantages

**Delayed emergence:** Could be a moderate problem

**Increased weed potential:** Could be a major problem

- Must be killed before it joints or after heading
- More difficult to kill after jointing and when temperatures are cool
- Possible weed potential in some varieties
- May be hard to kill with glyphosate

**Increased insects/nematodes:** Occasionally a minor problem

- Could increase risk of spring cutworm and potato stem borer
- Host for penetrans root lesion nematode

**Increased crop diseases:** Occasionally a minor problem

**Hinders crops:** Could be a minor problem

- Not advised for use in rotations with wheat
- May limit N availability to subsequent crops that are heavy N users

**Mature incorporation challenges:** Could be a moderate problem

## Contributors

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(Note: This publication was adapted with consent from MCCC with content from the Midwest Cover Crops Field Guide, Third Edition, and Cover Crop Selector Tool: [midwestcovercrops.org/selector-tool/](http://midwestcovercrops.org/selector-tool/).)

The Midwest Cover Crops Council ([www.midwestcovercrops.org](http://www.midwestcovercrops.org)) aims to facilitate widespread adoption of cover crops throughout the Midwest by providing educational/outreach resources and programs, conducting new research, and communicating about cover crops to the public.

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