Legumes

Red Clover
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/

Photo credit: Edwin Remsberg, SARE Cover Crop Image Database

Trifolium pratense

Identification Information

- Hairy leaves and stems
- Three leaflets per leaf
- Pink or lavender flowers
- Fibrous taproot

Cultural Traits

- Short-lived perennial
- Minimum germination temperature: 41˚F
- Reliable establishment window (state average): Mar. 29–Apr. 28
- Upright growth habit: 12–36 inches
- Preferred soil pH: 6.2–7.0

Heat tolerance:	Very good
Drought tolerance:	Good
Shade tolerance:	Very good
Flood tolerance:	Good (once established)
Low fertility tolerance:	Good
Winter survival:	Expected

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 inch
  - 8–10 lbs./acre (pure live seed)
- Broadcast with shallow incorporation
  - 9–11 lbs./acre (pure live seed)
- Broadcast without incorporation
  - 10–12 lbs./acre (pure live seed)

Additional planting information:

- 272,200 seeds/lb.
- Inoculation type: red clover, white clover
- Red clover may also be frost-seeded.
- When planting on slopes or using for forage/grazing, increase seeding rate.
- Broadcasting without incorporation is usually less dependable than drilling or broadcasting with incorporation.

Performance

- Dry matter = 2,000–5,000 lbs./acre per year
  - Biomass quantity is highly dependent on planting/termination dates and precipitation.
- Total nitrogen = 70–150 lbs. N/acre (not fertilizer replacement)
  - Nitrogen release can vary considerably, depending on stand density, growth, soil temperature, and moisture after clover has been destroyed.

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Termination Information

- Tillage
  - If terminating with only tillage, multiple passes are often required.
- Chemical

Additional termination information:

- Winter conditions and snow cover may affect winter survival.
- Follow NRCS guidelines for cover crop termination dates for crop insurance compliance.

Performance (continued)

Nitrogen source:	Excellent
Soil builder:	Very good
Erosion fighter:	Very good
Weed fighter:	Very good
Grazing:	Excellent
Quick growth:	Good
Lasting residue:	Good
Mechanical forage harvest:	Excellent
Grain seed harvest:	Excellent
Cash crop interseed:	Very good

Additional performance information:

- Red clover is an excellent forage, although it is a bloat hazard, it may cause slobbers in horses, and phytoestrogens may adversely influence sheep fertility during breeding.
- Red clover is easily established, widely adapted, and grows best where corn grows well.

Potential Advantages

SOIL IMPACTS

Subsoiler:	Very good
Frees P and K:	Very good
Compaction fighter:	Very good
Allelopathic:	Good
Chokes weeds:	Very good

OTHER

Attracts beneficials:	Very good
Bears traffic:	Good
Short windows:	Good

Potential Disadvantages

Delayed emergence: Could be a minor problem

Increased weed potential: Could be a minor problem

Increased insects/nematodes: Could be a moderate problem

Increased crop diseases: Occasionally a minor problem

Hinders crops: Occasionally a minor problem

Establishment challenges: Could be a minor problem

Mature incorporation challenges: Could be a minor problem

Contributors

Rachel Cochran, Ohio State University Extension;
Sarah Noggle, Ohio State University Extension

(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/.)*

The Midwest Cover Crops Council (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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