Legumes

Cowpea
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/

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Vigna unguiculata

Identification Information

- Long taproot
- Growth similar to soybean
- Hollow, hairless stems
- Hairless, smooth leaves that that may be dull or shiny
- Terminal leaflet that is usually longer than the lateral leaflets
- Long, slender pods (3–6 inches) with 6–13 seeds per pod

Cultural Traits

- Summer annual
- Minimum germination temperature: 65˚F
- Reliable establishment window (state average): June 10–Aug. 16
- Semi-upright to climbing growth habit
- Preferred soil pH: 5.5–6.5

Heat tolerance:	Excellent
Drought tolerance:	Excellent
Shade tolerance:	Good
Low fertility tolerance:	Excellent
Winter survival:	Winter-killed

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 1–1½ inches
  - 50–90 lbs./acre (pure live seed)
- Broadcast with shallow incorporation
  - 55–100 lbs./acre (pure live seed)
- Broadcast without incorporation is not recommended.

Additional planting information:

- 3,600 seeds/lb.
- Inoculation type: cowpeas, lespedeza
- When planting on slopes or using for forage/grazing, increase seeding rate.

Performance

- Dry matter = 2,500–4,500 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)
  - Plant early in the season (June) for full nitrogen potential.
  - Cowpea must be inoculated with the proper inoculant to increase nitrogen content.

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

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Termination Information

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

Additional termination information:

- Cowpea can compete with cash crop if not completely terminated.
- Adjust termination dates based on soil moisture.
- Follow NRCS guidelines for cover crop termination dates for crop insurance compliance.

Additional performance information:

- Some cultivars are nematode resistant.

Potential Advantages

SOIL IMPACTS

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

OTHER

Attracts beneficials:	Very good
Short windows:	Excellent

Potential Disadvantages

Increased insects/nematodes: Could be a moderate problem

- Host plant for soybean cyst nematode

Increased crop diseases: Could be a moderate problem

Establishment challenges: Occasionally a minor problem

- Weak plant with low volunteer seed survivability

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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