

Legumes

Sunn Hemp

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: Adobe Stock Photos

Crotalaria juncea

Identification Information

- Smooth trifoliate leaves
- Yellow flowers
- Extensive taproot

Cultural Traits

- Summer annual
- Minimum germination temperature: 42°F
- Reliable establishment window (state average): June 10–Aug. 16
- Upright growth habit: 3–9 feet
- Preferred soil pH: 6.5–7.5

Heat tolerance:	Excellent
Drought tolerance:	Excellent
Shade tolerance:	Very good
Flood tolerance:	Very 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.gov.usda.gov/#/state/OH/documents/section=4&folder=-6>

Planting Information

- Drilled at ¼–½ inch
 - 14–20 lbs./acre (pure live seed)
- Broadcast with shallow incorporation
 - 16–22 lbs./acre (pure live seed)
- Broadcast without incorporation is not recommended.

Additional planting information:

- 15,900 seeds/lb.
- Inoculation type: sunn hemp
- When planting on slopes or using for forage/grazing, increase seeding rate.

Performance

- Dry matter = 1,000–4,000 lbs./acre per year
 - Biomass quantity is highly dependent on planting/termination dates and precipitation.
- Total nitrogen = 50–150 lbs. N/acre (not fertilizer replacement)
 - Plant early in the season (June) for full nitrogen potential.
 - Performance is weather dependent.
 - Sunn hemp needs proper inoculant to increase nitrogen content.

Nitrogen source:	Good
Soil builder:	Good
Erosion fighter:	Good
Weed fighter:	Good
Grazing:	Good
Quick growth:	Good
Lasting residue:	Very good



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Termination Information

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

Additional termination information:

- Mature sunn hemp has fibrous stems that may be difficult to no-till drill into.
- Follow NRCS guidelines for cover crop termination dates for crop insurance compliance.

Additional performance information:

- Sunn hemp produces a high-fiber residue.
- Forage is suitable for goats/sheep but is less suitable for cattle grazing.
- Seeds contain alkaloids, which are toxic to livestock; therefore, avoid grazing after flowering.
- Bloat potential is easily managed by restricting to 30% of total ration or by mixing with a grass.

Potential Advantages

SOIL IMPACTS

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

OTHER

Attracts beneficials:	Good
Bears traffic:	Excellent

Potential Disadvantages

- Delayed emergence:** Occasionally a minor problem
- Increased weed potential:** Could be a minor problem
- Increased insects/nematodes:** Could be a moderate problem
- Hinders crops:** Could be a minor problem
- Establishment challenges:** Occasionally a minor problem
- 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/.)

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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