

Legumes

Hairy Vetch

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: Rachel Cochran, OSU Extension

Vicia villosa

Identification Information

- Looks very similar to common vetch
- Larger leaflets than common vetch; slightly wider and flatter at the tip
- Small hairs visible on stem and leaflets
- Tendrils, purple flowers, taproot, and many leaflets per leaf

Cultural Traits

- Winter annual
- Minimum germination temperature: 60°F
- Reliable establishment window (state average): Mar. 29–Apr. 28; July 24–Sept. 28
- Climbing growth habit: 3–7 feet
- Preferred soil pH: 5.5–7.5

Drought tolerance: Good

Shade tolerance: Good

Low fertility tolerance: Very good

Winter survival: Expected

- Great variation in varietal winter hardiness
- Winter survival also dependent on fall growth

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 ½–1½ inches
 - 15–20 lbs./acre (pure live seed)
- Broadcast with shallow incorporation
 - 17–22 lbs./acre (pure live seed)
- Broadcast without incorporation
 - 18–24 lbs./acre (pure live seed)

Additional planting information:

- 16,300 seeds/lb.
- Inoculation type: pea/vetch
- 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.
- Hairy vetch is slow to establish.

Performance

- Dry matter = 1,800–4,000 lbs./acre per year
 - Biomass quantity is highly dependent on planting/termination dates and precipitation.
- Total nitrogen = 90–180 lbs. N/acre (not fertilizer replacement)
 - Nitrogen source is considerable but unpredictable due to many factors that determine biological release.



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Termination Information

- Tillage
 - If terminating with only tillage, multiple passes are often required.
- Roller crimper
 - Roller crimping is the most difficult/variable termination method.
 - Crimp during reproductive stage (full bloom).
- Chemical

Additional termination information:

- Hard seed lasts for years.
- 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
Quick growth:	Good
Lasting residue:	Good
Grain seed harvest:	Very good
Cash crop interseed:	Very good

Additional performance information:

- Rates very good for early interseeding
- Tolerates low fertility, wide pH range, and cold or fluctuating winters
- Grows best on well-drained soils
- Non-host for sugarbeet cyst nematode and a poor host for soybean cyst nematode
- Alternate host for root lesion and root-knot nematodes
- Performs well with competition and shading in a mixed stand or interseeding
- Can exacerbate pea diseases, including black stem fungus
- Bloat hazard; seed and vegetation potentially poisonous

Potential Advantages

SOIL IMPACTS

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

OTHER

Attracts beneficials:	Excellent
Bears traffic:	Good
Short windows:	Good

Potential Disadvantages

Delayed emergence: Could be a major problem

Increased weed potential: Could be a moderate problem

- Hard seed may become an issue but can easily be controlled with herbicides.

Increased insects/nematodes: Could be a minor problem

Hinders crops: Could be a minor problem

- Do not plant in small-grain cash crop fields; seed contamination decreases value of small grains.

Establishment challenges: Occasionally a minor problem

Mature incorporation challenges: Could be a minor 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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OHIO COVER CROP FACT SHEET

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