

Grasses

Pearl Millet

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

Pennisetum glaucum

Identification Information

- Upright bunchgrass
- Broad, flat, pointed leaves with serrated edges
- Cattail-like inflorescences

Cultural Traits

- Summer annual
- Minimum germination temperature: 65° F
- Reliable establishment window (state average): May 20–Sept. 6
- Upright growth habit: 2–4 feet
- Preferred soil pH: 5.5–7.5

Heat tolerance:	Excellent
Drought tolerance:	Excellent
Low fertility tolerance:	Very good
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 ½–1 inch
 - 10–15 lbs./acre (pure live seed)
- Broadcast with shallow incorporation
 - 11–17 lbs./acre (pure live seed)
- Broadcast without incorporation is not recommended.

Additional planting information:

- 82,000 seeds/lb.
- When planting on slopes or using for forage/grazing, increase seeding rate.

Performance

- Dry matter = 1,500–4,000 lbs./acre per year
 - Biomass quantity is highly dependent on planting/termination dates and precipitation.

Nitrogen scavenger:	Very good
Soil builder:	Very good
Erosion fighter:	Very good
Weed fighter:	Very good
Grazing:	Excellent
Quick growth:	Excellent
Lasting residue:	Very good
Mechanical forage harvest:	Excellent



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES



Termination Information

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

Additional termination information:

- Mowing to a height of less than 2 inches after 2 feet or more of growth may terminate.
- Mowing after heading may terminate.
- Follow NRCS guidelines for cover crop termination dates for crop insurance compliance.

Additional performance information:

- Nitrate toxicity can be a concern.
- Graze at 24–30 inches to reduce the risk of nitrate toxicity.
- Mid-season cutting increases root penetration.
- Pearl millet does not tolerate shade, flooding, or ponding.
- Pearl millet is the best-known cover crop for reduction of penetrans root lesion nematode population densities, but this can be variety specific.

Potential Advantages

SOIL IMPACTS

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

OTHER

Bears traffic:	Very good
Short windows:	Excellent

Potential Disadvantages

Increased Weed Potential: Occasionally a minor problem

- Millets cultivated for grain could make enough seed to consider them a potential weed.

Increased Insects/Nematodes: Occasionally a minor problem

Hinders Crops: Occasionally a minor problem

Mature Incorporation Challenges: Could be a moderate problem

- Pearl millet does not germinate/thrive in cold soil.

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.

Funding for this project was provided by McKnight Foundation.

MCKNIGHT FOUNDATION