

WINTER CAMELINA

COVER CROP FACT SHEET FOR IOWA

Winter camelina (*Camelina sativa*) is a winter hardy brassica used as a cover crop to fight soil compaction and scavenge excess nitrogen and phosphorus. (Photo courtesy of Univ. of Illinois)



Identifying Features

- » Leaves and stems are partially hairy
- » Leaves are oblong-shaped
- » Grows as a small rosette

Cultural Traits

- » Winter annual brassica
- » Minimum germination soil temperature: 38° F
- » Cold tolerance temperature: -20° F
- » Seeding date: Mid August to Late October*

Planting Information*

- » **Drill/Plant** at ¼ - ½ inch (3-5 lbs./acre PLS**)
- » **Broadcast** (5-6 lbs./acre PLS)
- » **Aerial** (Not recommended)

*Planting information from Midwest Cover Crop Council (midwestcovercrops.org). Refer to local NRCS office recommendations (Iowa Field Office Technical Guide, Section 4, 340 Cover Crop) for seeding dates and rates pertinent to location specific financial assistance program requirements.

**Pure Live Seed

Additional planting information:

- » ~400,000 seeds/lb.
- » Broadcasting without incorporation is usually less dependable than drilling.
- » Planting too early can risk 'bolting' prior to winter and can compromise overwintering survival, whereas planting too late may not be developed enough to overwinter.
- » Winter Camelina can be more challenging to seed because of small seed size.



Winter Camelina Seed



Camelina Plant



Winter Camelina leaves



Winter Camelina leaves

C:N (Carbon:Nitrogen) Ratios

- » Winter Camelina 10:1 to 20:1

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Winter camelina growth during spring on a southeast Iowa field.



Winter camelina (left) in a Practical Farmers of Iowa field trial.

Performance

Dry matter = 2,500 - 6,000 lbs./acre per year
(Biomass quantity is dependent on planting and termination dates and precipitation.)

Performance Ratings

» Cash crop interseed (<i>early vegetative</i>)	Good
» Cash crop overseed (<i>late seed fill</i>)	Good
» Grazing quality	Poor
» Mechanical forage harvest	Poor
» Nitrogen fixer	NA
» Nitrogen scavenger	Good
» Weed suppression	Fair
» Compaction fighter	Fair
» Erosion control	Good
» Lasting residue	Fair
» Quick grower	Good
» Drought tolerance	Poor
» Low fertility tolerance	Poor
» Shade tolerance	Poor

Additional Considerations

- » Flowers of camelina provide nectar and pollen to pollinators in the spring.
- » Provides an additional cover crop to cereal grains that can overwinter in a mix.
- » Overwintering success is enhanced when mixed with a small grain cover crop.

Winter Camelina Plant



This fact sheet is a collaborative effort of USDA's Natural Resources Conservation Service (NRCS) and Iowa State University Extension and Outreach to provide cover crop options and information for Iowa landowners.