

MUSTARD

COVER CROP FACT SHEET FOR IOWA

Mustard (*Brassica sp.*) is a deep-rooted, quick growing cool-season annual broadleaf best used in cover crop mixes for fighting soil compaction and scavenging nitrogen from the soil.



Identifying Features

- » Basal rosettes until bolting/flowering.
- » Lower leaves are coarsely toothed.
- » Erect stems are generally hairless.
- » Cotyledons are kidney-shaped.

Cultural Traits

- » Cool-season annual broadleaf
- » Minimum germination soil temperature: 40° F
- » Cold temperature tolerance: 15° F
- » Seeding date: Early August to Early September* (F)***
- » Seeding date: Early April to Mid May* (S)***

Planting Information

- » **Drill** at ¼ - ½ inch (3 lbs./acre PLS**)
- » **Broadcast** (4 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

***F=Fall S=Spring

Additional planting information:

- » ~175,000 seeds/lb.
- » Broadcasting without incorporation is usually less dependable than drilling.
- » Consider using a later maturing variety for easier management and to avoid seed development/dispersal.



Mustard Seed



Young mustard leaves



Mustard seedlings



Mustard grows in a field of cover crops.

C:N (Carbon:Nitrogen) Ratio

- » Mustard 10:1 to 30:1

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Small mustard leaves.



Mustard leaves form a basal rosette when growing.

Performance

Dry matter = 200 - 2,000 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	N/A
» Nitrogen scavenger	Good
» Weed suppression	Fair
» Compaction fighter	Good
» Erosion control	Fair
» Lasting residue	Fair
» Quick grower	Very good
» Drought tolerance	Fair
» Low fertility tolerance	Poor
» Shade tolerance	Poor

Additional Considerations

- » If consumed in large quantities, sulfur compounds in mustard can cause digestive track issues for livestock.
- » Mustard can suppress Pythium, Fusarium and Rhizoctonia root rots in soybeans.
- » Mustards produce a natural herbicide called glucosinolate, which reduces weed germination.
- » Avoid letting mustard go to seed. It could become a weed in the following crop.
- » Compaction busting to depths of 1 to 3 feet.

Mustard Plant with Taproot



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.