

FABA BEAN

COVER CROP FACT SHEET FOR IOWA

Faba bean (*Vicia faba*), also called Fava bean, is a summer annual legume that is very good for fixing nitrogen. Its strong tap root is good at fighting compaction and biomass production can help reduce soil erosion.



(Courtesy of Green Cover)

Identifying Features

- » Stems are square and hollow
- » Compound leaves with 3-7 leaflets
- » No tendrils present

Cultural Traits

- » Summer annual legume
- » Minimum germination soil temperature: 41° F
- » Cold tolerance temperature: 15° F
- » Seeding date: Late July to Mid September* (F)***
- » Seeding date: Early April to Mid May* (S)***

Planting Information*

- » **Drill/Plant** at 1-2 inches (75-100 lbs./acre PLS**)
- » **Broadcast** (85-110 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:

- » ~1,600 seeds/lb.
- » Thrive in cool weather, making them a good selection for early spring or late fall planting.
- » Can adapt to saturated soil after planting.
- » Increase seeding rate when planting on slopes or using for forage/grazing.



Faba Bean Seed



Early Growth Stage



Faba bean flowers



Faba bean field

C:N (Carbon:Nitrogen) Ratios

- » Faba Bean cover crop 20:1 to 24:1

FABA BEAN COVER CROP FACT SHEET



Looking down on a faba bean plant. (Courtesy of Chico State University)



Faba bean roots. (Courtesy of Chico State University)

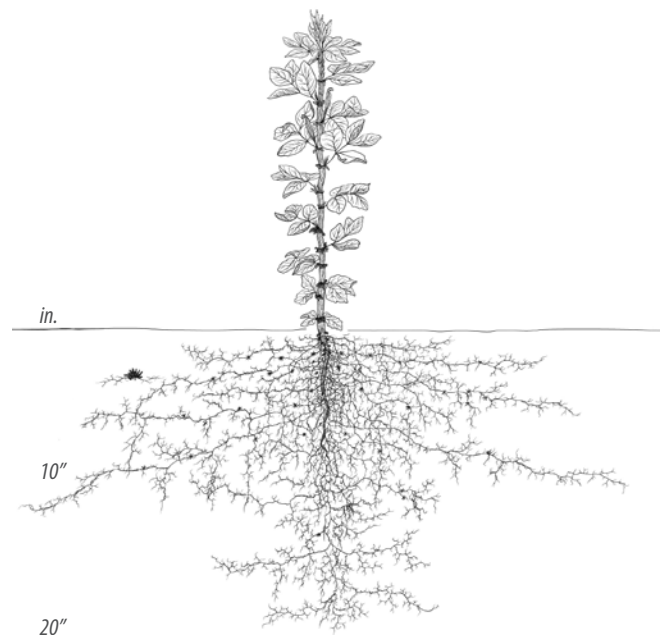
Performance

Dry matter = 500 - 3,000 lbs./acre per year
(Biomass quantity is dependent on planting and termination dates and precipitation.)

Performance Ratings

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

Faba Bean Plant and Root Structure



Drawing provided by Conservation Cropping Systems Initiative (ccsin.org)

Additional Considerations

- » Bitter vegetation that is not great for grazing.
- » Must be planted early in summer to maximize nitrogen content.
- » When interseeding, time seeding to match appropriate crop growth/maturity.
- » Faba beans don't grow well in heavy soils.

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.