

# 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.



### 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](http://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 pods up close*



*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)

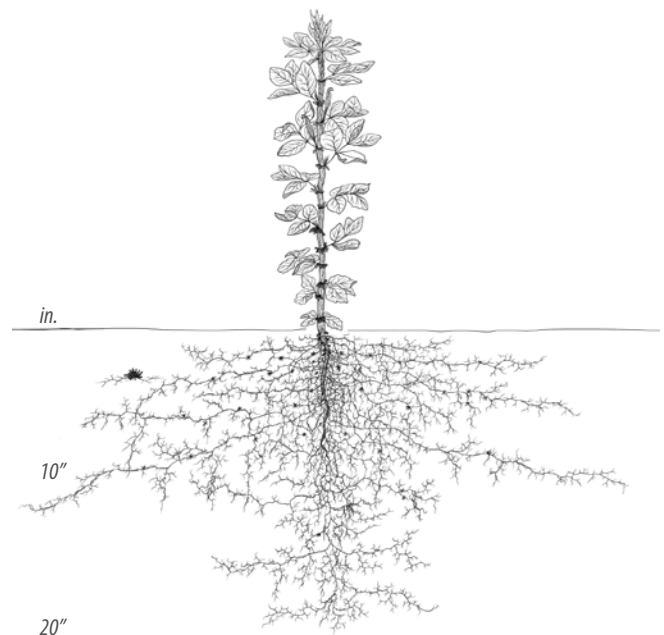
### Performance

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](http://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.