

COWPEA

COVER CROP FACT SHEET FOR IOWA

Cowpea (*Vigna unguiculata*) is a warm-season annual legume. Cowpeas can be a good grazing source and nitrogen fixer that grows quickly.



Identifying Features

- » Trifoliate compound leaf
- » Hollow, hairless stem
- » Hairless, smooth leaves
- » Small bract on center petiolule
- » Glossy cuticle on leaves

Cultural Traits

- » Warm-season annual legume
- » Minimum germination soil temperature: 58° F
- » Cold temperature tolerance: 32° F
- » Seeding date: Mid May to Early August*

Planting Information*

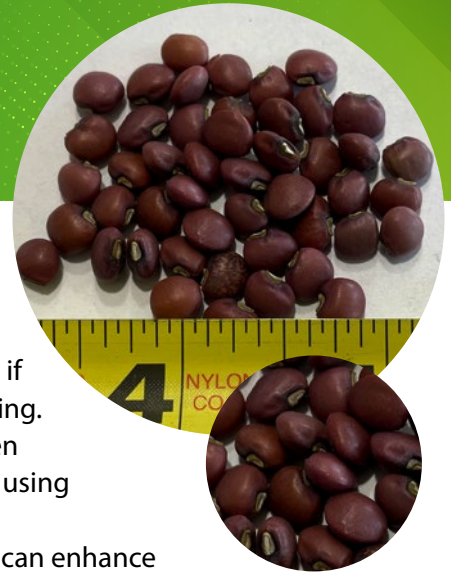
- » **Drill** at 1 - 1½ inch (30 lbs./acre PLS**)
- » **Broadcast** (38 lbs./acre PLS)
- » **Aerial** (not recommended)

*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:

- » ~4,000 seeds/lb.
- » Increase seeding rate if using for forage/grazing.
- » If growing for nitrogen production, consider using inoculation.
- » Planting in a mixture can enhance performance as a cover crop.



Cowpea Seed



Close-up of cowpea leaves.



Cowpea field. (Roger P Ellis)



Cowpeas sprouting in Iowa.

C:N (Carbon:Nitrogen) Ratio

- » Cowpea 18:1 to 22:1

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Cowpea seedling.



Cowpeas interseeded with corn. (Chris Teachout)

Performance

Dry matter = 2,500 - 4,500 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>)	N/A
» Grazing quality	Very good
» Mechanical forage harvest	Good
» Nitrogen fixer	Very good
» Nitrogen scavenger	Good
» Weed suppression	Fair
» Compaction fighter	Very good
» Erosion control	Good
» Lasting residue	Fair
» Quick grower	Very good
» Drought tolerance	Very good
» Low fertility tolerance	Good
» Shade tolerance	Fair

Additional Considerations

- » For full nitrogen fixation potential, plant cowpeas early in the season.
- » Fixed nitrogen is not available during active growth.
- » Cowpeas can compete with the cash crop if interseeded.
- » When interseeded with corn, cowpea has a tendency to climb and can impede corn harvest.
- » As cowpea mature they become stemmy, reducing grazing preference.

Cowpeas Interseeded Into Corn



Cowpeas climb cornstalks prior to harvest.

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.