

RED CLOVER

COVER CROP FACT SHEET FOR IOWA

Red Clover (*Trifolium pratense*) is an easy to establish cool-season/winter annual legume that provides an excellent nitrogen source to the soil. Many Iowa farmers use red clover in a mix for livestock grazing.



Identifying Features

- » Large, elongated leaflets with inverted, V-shaped variegation. Three leaflets per leaf.
- » Densely pubescent
- » Palmately trifoliate

Cultural Traits

- » Cool-season/winter annual legume
- » Minimum germination soil temperature: 42° F
- » Cold temperature tolerance: -30° F
- » Seeding date: Early August to Mid September* (W)***
- » Seeding date: Early April to Mid May* (S)***

Planting Information*

- » **Drill** at ¼ - ½ inch (8 lbs./acre PLS**)
- » **Broadcast** (10 lbs./acre PLS)
- » **Aerial** (12 lbs./acre PLS)

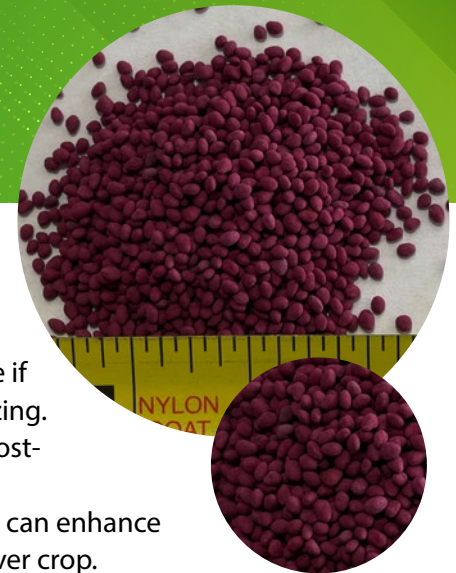
*Planting information from Midwest Cover Crop Council (midwestcovercrops.org). Refer to local NRCS office recommendations (Iowa Field Office Technical Guide, Section 4, 340 Cover Crop) for seeding dates and rates pertinent to location specific financial assistance program requirements.

**Pure Live Seed

***W=Winter Red Clover S=Spring Red Clover

Additional planting information:

- » ~270,000 seeds/lb.
- » Increase seeding rate if using for forage/grazing.
- » Red clover may be frost-seeded.
- » Planting in a mixture can enhance performance as a cover crop.
- » When interseeding, time seeding to match appropriate crop growth/maturity.
- » If growing for nitrogen production, consider using inoculation.



Red Clover Seed
(Shown with seed treatment)



Red clover sprouts. (Seedball)



Red clover leaves.



Cattle graze a mix that includes red clover in southeast Iowa.

C:N (Carbon:Nitrogen) Ratio

- » Red Clover 14:1

RED CLOVER COVER CROP FACT SHEET



Small red clover leaves. (Seedball)



Wheat with red clover in an Iowa cover crop mix.

Performance

Dry matter = 2,000 - 5,000 lbs./acre per year
(Biomass quantity is dependent on planting and termination dates and precipitation.)

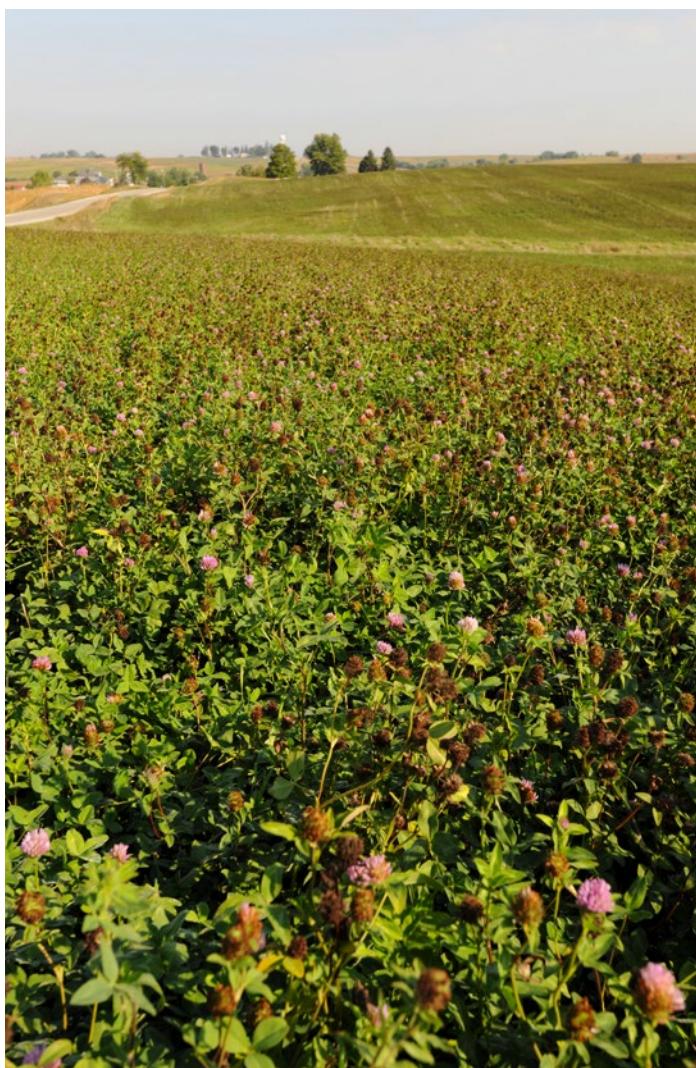
Performance Ratings

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

Additional Considerations

- » May cause bloat when grazed.
- » Grows best where corn grows well.
- » A poor host for soybean cyst nematode.
- » Extensive root system permeates the soil. Taproot may penetrate several feet.
- » Excellent pollinator if allowed to flower in the spring.
- » To produce measurable nitrogen for a cash crop, allow red clover to grow until at least mid-May.

Red Clover Field in Iowa



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.