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.

C:N (Carbon: Nitrogen) Ratio
» Red Clover 14:1

Red Clover sprouts (Seedball)  Red Clover leaves.
Cattle graze a mix that includes red clover in southeast Iowa.
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 (*early vegetative*)  Good
» Cash crop overseed (*late seed fill*)  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.

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.

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