

# SWEET CLOVER

## COVER CROP FACT SHEET FOR IOWA

**Sweet clover** (*Melilotus officinalis*), also called Yellow sweet clover, is a biennial legume. It is deep-rooted and adapted to a wide range of soils. Sweet clover is a good soil-improving crop with a strong taproot that opens up subsoil.



### Identifying Features

- » Trifoliate leaves with short stems.
- » Toothed edges on leaf margin.
- » Hairy or hairless leaves.

### Cultural Traits

- » Biennial legume
- » Minimum germination soil temperature: 42° F
- » Cold tolerance temperature: -30° F
- » Seeding date: Early August to Early October\* (F)\*\*
- » Seeding date: Early April to Early May\* (S)\*\*

### Planting Information\*

- » **Drill/Plant** at ¼ - ½ inches (6-10 lbs./acre PLS\*\*)
- » **Broadcast** (8-13 lbs./acre PLS)
- » **Aerial** (9-15 lbs./acre PLS)

\*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:

- » ~266,000 seeds/lb. (1 bushel = 56 pounds)
- » Overseeding and aerial seeding success is dependent on rainfall after seeding.
- » Hard seed will germinate several years after initial seeding.



Sweet Clover Seed



Toothed edges on the leaves.



Sweet clover seedlings.



Cattle graze sweet clover.

### C:N (Carbon:Nitrogen) Ratios

- » Sweet Clover cover crop 15:1



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Early sweet clover growth.



Sweet clover popping through the soil.

### Performance

Dry matter = 200 - 4,000 lbs./acre per year  
(Biomass quantity is dependent on planting and termination dates and precipitation.)

#### Performance Ratings

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

### Additional Considerations

- » Host for soybean cyst nematode and Penetrans Root-Lesion Nematode.
- » Attracts polinators if left to flower.
- » Should be grazed in the spring and early summer when its palatability is at its highest.

### Sweet Clover Plant



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.