

# Forage Factsheet – Sweet Clover

Species Name: Sweet Clover – *Melilotus officinalis*

- White flowered sweet clover has low coumarin levels, coarse stems, and has poor winter hardiness
- Yellow flowered sweet clover has some low coumarin varieties, finer stems and leaves, and has greater winter hardiness

Origin: Asia Minor.

Longevity: Biennial.

Uses: Pasture, hay, soil improvement, silage.

Optimal time of use: Graze sweet clover when it is between 9.75-14 inches (25-35 cm) tall to maximize palatability and feed quality. Cut sweet clover at the bud stage for the best quality hay. Use a mower/conditioner to speed dry down and reduce leaf loss. If cut late, sweet clover hay is very stemmy and relatively unpalatable.

Recovery after use: In the establishment year leave at least 12 inches (30 cm) of stubble after use to enhance stand survival. If two cuts of hay are desired in the second year of production, cut at 12 inches (30 cm) during the first cut.

Yield: Sweet clover yields approximately 2620 lbs/acre (2977 kg/ha) in the Brown soil zone, 6405 lbs/acre (7278 kg/ha) in the Dark Brown soil zone, and 5790 lbs/acre (6579 kg/ha) in the Black and Grey soil zones.

Palatability/Nutritional Value: Sweet clover is palatable in the vegetative through the bud stage but palatability decreases as it matures. Yellow sweet clover has an average digestibility of 58% and crude protein of 16% in the early bloom stage. Sweet clover can cause bloat in livestock. Use a low coumarin variety of sweet clover. Dicoumarol, formed in moldy sweet clover hay, interferes with blood clotting in livestock.

Competitiveness: Sweet clover is competitive with weeds.

Winter Hardiness: Sweet clover has very good winter hardiness.

Drought Tolerance: Sweet clover has good drought tolerance.

Erosion Control: Sweet clover is fair at reducing erosion. Sweet clover can be used as a plow down crop to add organic matter and nitrogen to the soil.

Ease of Establishment: Sweet clover seedlings are vigorous and establish easily. Sweet clover has a high hard seed count and should be scarified before seeding.

Suggested Mixtures: Can be used as a short lived component of a forage mixture. Avoid high seeding rates in a mix, as sweet clover is very competitive.

Salinity Tolerance: Sweet clover has moderate salinity tolerance, superior to all other common forage legumes.

Flooding Tolerance: Sweet clover can withstand saturated soils for approximately one week in the spring.

Soil Texture: Sweet clover is suited to all soil textures (sandy, loamy, clay), but produces best on fertile clay to clay loam soils.

Acidity Tolerance: Sweet clover has poor tolerance of acidic soils.

Management Considerations: Inoculate and scarify sweet clover seed. Conduct a soil test at the beginning of the second year of production and fertilize accordingly to maximize sweet clover production.