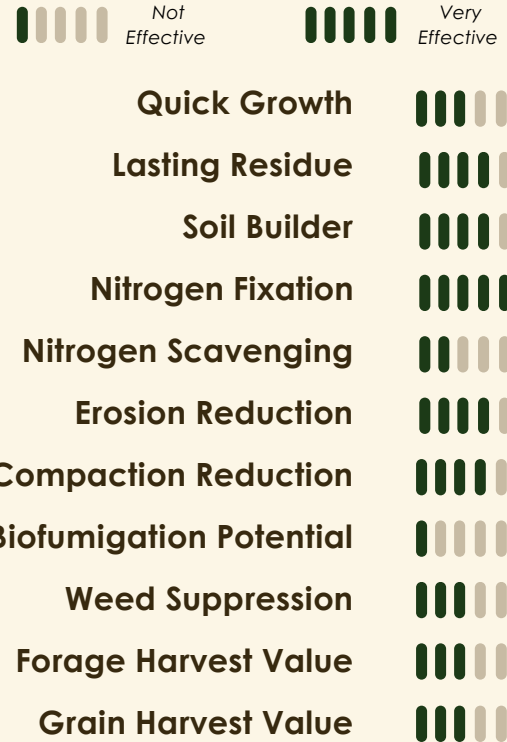


SWEET CLOVERS

MELILOTUS SPP. - COOL SEASON ANNUAL/BIENNIAL LEGUME

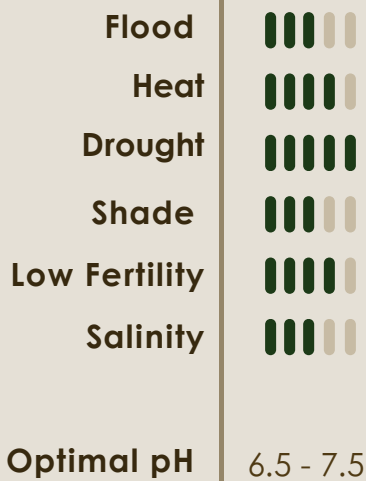


PRODUCTION GOALS

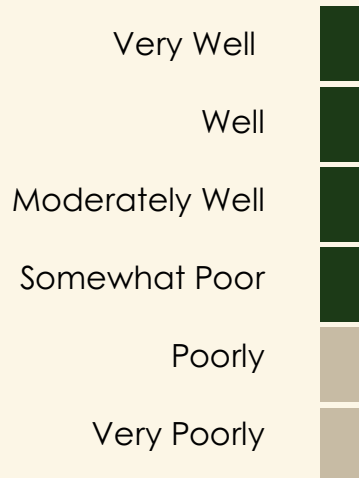


Sweet clover has an upright growth habit and deep taproot. It can be either an annual (white flower) or biennial (yellow flower). Its deep taproot is thought to decrease compaction and allows sweet clover to be drought tolerant once established. It can be used for grazing, however mature sweet clover has decreased palatability. White flowering sweet clover does not produce as much as the yellow flowering and is less drought-tolerant.

TOLERANCES



SOIL DRAINAGE CLASS



AREA & ADAPTABILITY

Sweet clover can be grown successfully across BC. It is very drought tolerant and does not tolerate waterlogged soils well. Yellow sweet clover has better cold tolerance than white sweet clover.

Winter Hardiness Zone - 4-9

Seeding Considerations

Rate Drilled	Rate Broadcast	Depth	Frost Seeding	Minimum Germination Temperature	Seeds
6-15 lbs/ac (7-17 kg/ha)	15-20 lbs/ac (17-22 kg/ha)	0.25-1 in (0.5-2.5 cm)	No	6°C (42°F)	79,000 /lb (174,000 /kg)

Based on cover crop goals select for an annual or biennial variety. Choose a low coumarin variety if using sweet clover for livestock feed. Use an alfalfa or sweet clover inoculant to ensure rhizobia formation and adequate nitrogen fixation. Use scarified seed to improve germination.

Management Considerations

Sweet Clover is able to produce large amounts of biomass from marginal land and can be a useful partner in blends with fall-seeded biennials such as winter cereals. It thrives anywhere where alfalfa grows well.

Sweet clover contains coumarin which can be converted to dicoumaral if mold occurs even in very small amounts. Dicoumaral is poisonous to livestock so feed should be tested for the toxic compound to avoid adverse reactions in livestock even when mold is not observed. Sweet clover also has bloat risk; however the risk is reduced in mixes because young sweet clover tends to be bitter and livestock select other plants at that stage.

Inter-seeding Potential



Volunteer Establishment



Nitrogen Concentration

No data

Dry Matter Yield

2500-5000 lbs/acre
2800-5600 kg/ha

Nitrogen Contribution

20-170 lbs/acre
22-190 kg/ha

Termination

Sweet clover can be terminated through tillage, mowing or the use of a herbicide. Terminate at the late bud stage to maximize the amount of plant available nitrogen.

References

- Elmy, K. 2020. Cover Cropping in Western Canada. Friesen Press.
- Midwest Cover Crop Council. (n.d.)
- Northeast Cover Crop Council. (n.d.)
- Sustainable Agriculture Research and Education (SARE). 2012. Managing Cover Crops Profitably: 3rd Ed. National Institute of Food and Agriculture, USDA, University of Maryland & University of Vermont.
- U.S. Department of Agriculture. (n.d.). Pacific Northwest Cover Crop Selection Tool.

Disclaimer

The information contained in this document is true and accurate to the best of our knowledge without guarantee or warranty of its correctness or completeness. The content is intended to be a general guideline, but the performance of the cover crop(s) may differ from what is described in the document depending on environment and farm operation and may vary between years. The Government of British Columbia and its directors, agents, employees, or contractors will not be liable for any claims, damages, or losses of any kind whatsoever arising out of the use of, or reliance upon, this information.