

There are two varieties of sweet clover in Canada, the white and the yellow. The former (*Melilotus alba*) is the more common and is considered somewhat superior to the latter (*Melilotus officinalis*). Both these sweet clovers are biennial, i.e. live two years.

A third variety, called *Melilotus indica*, is a small annual plant, which is grown in California, Utah and other western states of the Union.

In Canada, only the White Sweet Clover is of any agricultural interest.

ORIGIN AND DISTRIBUTION OF WHITE SWEET CLOVER.

White Sweet Clover, also called Bokhara Clover, is a native of Asia. It was introduced into Europe over two thousand years ago and was brought to America about the middle of the eighteenth century. In Canada it is now found quite commonly, especially in the eastern provinces.

REQUIREMENTS AS TO SOIL.

Sweet clover can be grown successfully on almost any kind of soil. It is often found in sterile, dry places where nothing else will grow on account of lack of food. It will thrive surprisingly well in sandy fields, on stiff clay, in sour soil, on alkali land and in many other places where most farm crops prove a failure. This ability to live and, in fact, to do well in soil where the food supply is scant, is largely responsible for the glowing praise bestowed upon sweet clover during recent years.

SWEET CLOVER AS A SOIL IMPROVER.

Like most other biennial plants, sweet clover develops a strong and somewhat fleshy tap root which penetrates the ground to a considerable depth. Its numerous branches break through even very compact soil, thus making it porous and penetrable to air and water. The fleshy nature of the taproots makes them decay readily when the plants, after the end of the second year, die. Considerable humus can also be added to the soil by incorporating with it the rather rank top growth.

For these reasons Sweet Clover is no doubt of great value on old, worn-out land and on soil the mechanical condition of which needs improving.

Like other leguminous plants Sweet Clover through the assistance of certain bacteria has the faculty of gathering nitrogen from the air circulating in the soil. Soil deficient in nitrogen will consequently be improved through the growing of Sweet clover.

In this connection it must be mentioned that the bacteria occurring on the roots of Sweet clover, seem to be identical with those occurring on the roots of alfalfa. At any rate, they act in exactly the same way as the alfalfa bacteria, and soil from a sweet clover field can therefore be used to advantage for inoculation of fields prepared for alfalfa. For the same reason, sweet clover can be used, on poor soil, as a preparatory crop for alfalfa.

ATTRACTIVENESS TO STOCK.

One of the most serious objections raised against sweet clover is the statement that farm animals do not like it and that they cannot be induced to eat it unless starved. Its distastefulness to stock is, as is well known, due to the presence of a bitter element, called coumarin, which is especially noticeable in the wild plants.

On the other hand, it has been claimed that animals are very fond of it and prefer it to other kinds of fodder.

Observations made by the writer indicate that cattle and horses at least carefully avoid sweet clover in pastures, where other plants are at hand, and that, to most animals, the hay is far from attractive. But domestic animals, like human beings,