

The Truth about Sweet Clover

By M. O. NALTE, Ph. D.

During the last twelve months or so the interest in Sweet Clover, shown by farmers in different parts of Canada, has assumed surprising proportions. Numerous articles in the agricultural press and still more numerous 'letters to the editors' of the agricultural papers have discussed the Sweet Clover question, but so far no definite conclusions as to the merits or demerits of the Sweet Clover have been arrived at.

A certain number of the writers cannot condemn it strongly enough, claiming that it is a 'nuisance' and a 'pest' which, when introduced on a farm, will spread beyond control and which will lessen the value of the farms. Instances have been quoted in which the selling price of farms has dropped as much as two thousand dollars on account of their being overrun by Sweet Clover, willfully introduced by their owners. On the other hand a great number of writers are enthusiasts who look upon Sweet Clover as a forage crop of extraordinary value, which, unfortunately, has been misjudged and altogether underestimated in Canada. Articles have appeared in which the writers remark that 'colleges across the border are loud in its praise' and that it is a 'staple crop in Europe,' etc. The result of these contradictory statements is that the unfortunate farmer who is unfamiliar with the plant in question is at a loss as to its

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.

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 thru even very compact soil, thus making it porous and penetrable to air and water. The fleshy nature of the tap roots 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 has the faculty of gathering nitrogen from the air circulating in the soil. Soil deficient in nitrogen will consequently be improved thru 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



A rough shelter from the sun is indispensable for the comfort and proper development of the young stock

real value. In the following paragraphs a few facts will be given which, it is hoped, will help to clear the situation.

Varieties

Under the name of Sweet Clover are recognized a number of leguminous plants characterized by a very pronounced sweet odor. They all belong to the same genus, viz. Melilotus, and are often called melilots. Altho called Sweet Clover, they have not much in common with the true clovers, represented by the Red, White and Alsike varieties. As a matter of fact, they are more related to alfalfa than to any other leguminous plant.

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. 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. 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

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, can develop a taste for and grow very fond of food which they at first refuse to touch. Whether animals, unfamiliar with Sweet Clover, will like it or not from the beginning also depends upon what time of the year they be pastured on it. If turned on to it early in the spring when the plants are very juicy and tender, they will have less objection to it than later when the plants are better developed. This is due not only to the fact that early in the spring the animals are hungry for green feed, but also because the young plants contain a much smaller amount of

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