

turn stay in Alfalfa for six years while the crops on the other fields make another complete circle. When the Alfalfa is not considered this gives a six-year rotation. Counting in the Alfalfa, however, the rotation becomes one of thirty-six years.

Soil

The selection of the field for Alfalfa is very important. The location must be high and dry for if water will stand on it any time during the year the Alfalfa will kill out. The subsoil should be deep and open with a permanent water level at least four or five feet below the surface. This Legume has a long tap root which will go down to the water level but not into it and while most of the feeding roots are in the first eighteen inches it draws food from the lower depths and the lower the tap root the larger the feeding space. While Alfalfa will grow on practically any soil it will thrive best on a rich sandy loam that contains an appreciable amount of lime. The soil should be free from noxious weeds as this plant will not eradicate these pests.

Preparation of the Soil

Alfalfa is very tender and is easily killed during the first year of growth so that the soil should be in a fine state of tilth before seeding. To get it in this condition preparation should start the year previous. Summer-fallowing or a hoed crop are the best preparations. The cultivation kills the weed and conserves the moisture. In the spring the soil should be disced and harrowed to work up a fine mulch on the surface leaving the subsoil firm. If the field is harrowed from time to time in the spring practically all of the annual weeds can be killed before the seed is sown.

Selection of Seed

In selecting seed the variety should be considered first. There are three sorts that are giving good satisfaction in Manitoba, the Grimm, Baltic and Turkestan. The two former are the hardiest and give best results. Turkestan is a commercial term and the seed may be either hardy or tender, so that where the former two can be obtained, only they should be sown. They are, however, northern grown and the seed is scarce and consequently high priced. For this reason tender sorts are often sold by unscrupulous dealers for these hardy strains. It is difficult to distinguish between them so that seed should not be accepted unless it is guaranteed by a reliable firm.

Another thing to be on the watch for is noxious weed seeds. The Alfalfa is usually grown in the older districts to the south and is liable to contain seeds that are both noxious and new to the West.

To insure a good stand the seed should be tested for germination. If it does not test over 70 per cent a larger quantity of seed should be