

PART I.

ALFALFA OR LUCERN: ITS CULTIVATION AND USE.

By

J. H. GRISDALE, B. AGR., AGRICULTURIST, CENTRAL EXPERIMENTAL FARM.

Alfalfa or Lucern is grown in Canada more or less extensively from the Atlantic to the Pacific ocean. It is the staple forage plant for winter feeding in the drier parts of British Columbia, and it has been grown in Southern Alberta for many years. It is not much known in Manitoba, but is possible of easy propagation in almost all parts of Ontario. It is, and has been grown long and successfully in Quebec, and is not unknown in Nova Scotia and New Brunswick. In Prince Edward Island, whether due to lack of interest or some peculiar climatic or soil condition, it has never, so far as the writer knows, been grown with success.

It has been grown with varying success for many years on the different farms included in the system of Dominion Experimental Farms. The first trials in most cases proved more or less discouraging, but experience gradually acquired rendered later experiments more successful. At Ottawa in recent years a failure with this crop has been practically unknown, and stands eight and nine years old can be shown. At Brandon in Manitoba a plot sown in 1896 has been giving crops varying from 1 ton, 1,500 lbs., to 3 tons, 1,500 lbs., annually ever since. It is therefore apparently quite hardy in that part of the province. It might be stated, however, that 60 lbs. of seed of unknown vitality was sown to the acre in the case mentioned, a larger quantity than we have ever found necessary. In Assiniboia, at Indian Head, Mr. Mackay sowed a plot of Turkestan Alfalfa in 1900 which came through the winter in good shape, but was turned under without any crop being harvested. Common alfalfa seed was sown on a half-acre plot at the rate of about 30 lbs. per acre in 1902. It came safely through the winter of 1902-3 and gave a crop of 1 ton, 1,012 lbs., per acre in the summer of 1903. At latest reports it is still standing and well. At Nappan, Mr. Robertson has grown it with rather poor success for three years. At Agassiz conditions do not favour this crop, but as stated elsewhere, it is very extensively grown in some parts of British Columbia, as for instance, in the Kamloops and other of the dry interior districts. The writer has seen it growing at Calgary, Alberta, and has been credibly informed that it has been growing for over twenty years at Maple Creek, Assa.

As stated, it has been grown in almost every province to a greater or less extent. That it has not been grown more largely seems due to two things, first, that very little is known about its good qualities as a forage plant and, second, that very few know the proper methods of cultivation and its peculiar soil and moisture requirements.

Without careful observance of its peculiar requirements success may not be hoped for, but a careful study of, and compliance with these is amply repaid by almost certain success and large returns.

THE PLANT.

Lucern is another name for Alfalfa. It is a leguminous plant just as are peas, beans and clovers. Plants of this family are all rich in protein (see part II).

Alfalfa is a perennial, that is a plant capable of living many years under favourable conditions. It is upright and branching in its habit of growth, the mature plants varying in height from 1 to 3½ feet. Its leaves are three parted, the leaflets being narrowly oblong in outline. Its flowers are purple, and are arranged like those of the vetch rather than as those of the clovers. It sometimes produces seeds in Canada in small quantities.

The stem is rather woody, which characteristic develops very rapidly as maturity approaches. The leaves are attached by slender stems which become very brittle when the somewhat matured plant is dried.