

to which I referred at the last meeting. It is called the Northern Blue Joint. It is not quite the same as the ordinary Blue Joint, which is common in low lands and marshes, and grows along streams and rivers. This is a northern variety and has a greater value as a fodder plant. It has more leaf and the stems are rather finer, and I believe it will prove a very valuable grass. One of the problems which has to be considered is to find a grass that will grow in the flooded meadows particularly along the banks of the St. Lawrence, where there are a great many acres which are flooded in the spring. The question is as to what kind of grass can be sown profitably to take the place of the coarse sedges and marsh grasses which grow there naturally. This grass will be valuable for use in this way, as well as the common Blue Joint grass. A variety known as the Canary Reed-grass will also be a valuable grass for this purpose. This is one of the problems we are considering now.

#### WEEDS.

The next subject which has been studied in the Botanical Department at the Experimental Farm particularly during the last two years is that relating to weeds. That a deep interest has been shown in this subject is evidenced by the large number of letters received from farmers in all parts of Canada, but particularly in Manitoba. Weeds in Manitoba had increased so much that the farmers saw they had to take some very decided measures to eradicate them or they would become a source of very serious loss. The Minister of Agriculture, the Hon. Mr. Greenway, published a very excellent bulletin, decidedly the best bulletin that has ever been published for the purpose for which it was required and one which has done a great deal of good in the country. During the last two summers for a short time, with the permission of our Minister of Agriculture, I have been in Manitoba lecturing upon weeds, and in that way a considerable interest has been stirred up in the subject; and a large number of farmers have become acquainted with the habits of weeds and have been enabled to identify them. I think there is no more important information about weeds, looking to their eradication, than to understand the nature of their growth. Although there are a large number of plants which are sometimes aggressive enemies to farmers, the principles upon which they are to be fought are simple, and really all depend on the nature of the plant, *i.e.*, on one or two very important characteristics of each kind,

#### CLASSIFICATION OF WEEDS.

The division of all plants into three classes is, of course, very important, namely: Those plants which live for one year, those which have a life of two years, and all others which live for many years. For those which live for one year, the eradication is simply a matter of preventing them from seeding and this again applies to those that live for two years. If seeds are not produced the plants, of course, must die out. The most difficult class of all to fight against is that known as perennials, or plants which live for many years. Again, we find that we can divide these up again, for purposes of considering how to get rid of them, into those which root near the surface of the ground, and those which root deeply. To get rid of those which root near the surface of the ground, we have only to prevent their seeding and by ploughing throw them up to the air to dry out; but with those which root deeply it is a more difficult matter; we must plough deeply, so as to prevent the formation of leaves as long as possible so that they may starve; the leaves are necessary to the plants to absorb food from the air. These general principles cover the whole of weed eradication; but we know that in different sections of the country the same plant may develop different characteristics. As an illustration of this, I need only refer to the Canada thistle. The Canada thistle about Winnipeg and for a few miles beyond is very troublesome, and is just as aggressive to farmers there as it is here. But farther west on the drier lands the Canada thistle is not a weed, is not aggressive, does not produce many seeds and is no trouble to keep down. That is largely a matter of climate. There are many plants which give no trouble here; but which under different climatic conditions would become weeds. In the eastern provinces of Canada to prevent the Canada thistle from becoming our master, we find that mowing early and again about September to prevent the leaves from performing their functions and storing up nourishment in the rootstocks,

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