

marshy land. These nurseries themselves often collect the seeds of the most common species for their own use. On account of these very favorable conditions, the nurseries are able to produce a beautiful even-looking product of an uncommonly rapid growth. These young seedlings are then either sold or transplanted for further cultivation. Most of them are sold to the other big nursery centre of Europe, Halstenbeck in Holstein, who transplant them and sell them as four years old. The soil in Holstein is very sandy without rocks. The country is flat and very easily cultivated. For miles and miles you can drive through nurseries all cultivating young forest trees, hedge-plants and roses. The ground is very valuable, and divided into a number of small nurseries. On account of the valuable ground, the nursery owners are obliged to transplant their young trees with exceedingly close spacing, often with not more than three inches between the rows, and one inch between the plants in each row, thereby forming a plant of a very stringy appearance. In order to push the plants from this sandy soil, the nurseries are using a great amount of fertilizers, often, per acre, a thousand pounds of superphosphate, four hundred pounds of kali, and six hundred to a thousand pounds of chili-saltpeter. These nurseries in Holstein have also big seed-beds, especially of conifers, but as a rule the seedlings are made in France, Belgium and Holland and are transplanted in Holstein. From these two plant centres is supplied nearly the whole world. Immense quantities have been sold to England and to the United States. In Denmark, Scandinavia, and Germany, a forester who has to buy plants from the nurseries is looked upon as a failure. It ought to be the same here in Canada.

Suppose you buy seeds from the mild misty climate of Norwegian fjords or from the super-cultivated marshes of Holland or Belgium or from the Baltic shores of Northern Germany or plants which have passed their first stage of life in the hot beds of Holland or Belgium, or in Holsteins sands, unnaturally fed on fertilizers, and transplant these in your nearly Arctic climate, in your dry inland air, what result do you expect? In those nurseries, all kinds of fungi and parasites are in abundance. You have already imported the white pine blister rust. If you buy plants to any extent from Europe, you will im-

port all kinds of diseases, both fungi and insects. You will not advance the cause of Forestry in that way. Allow me, in this connection, to point out that you have been importing a number of white spruce seeds and plants from Europe, especially from Sweden.

The mother tree is *Picea alba*, a species of spruce very inferior to your beautiful *Picea Canadensis*. The tree, *Picea alba*, originated from North America. It was imported to Europe about the year 1700. It has degenerated to a small poorly-tapering tree, which is never used except as a wind break.

In forestry, as in farming and stock-raising, the hereditary principle is of great importance. A tree from a coast climate will not thrive in an inland climate. In Europe, we have seen, that if we try to force nature, by planting trees in climates where they are not at home, they will be destroyed by all kinds of parasites. In Denmark, which has a coast climate we imported Austrian Pine from the inland climate of Austria, and planted it in great quantities on the moors of Jutland, thousand of acres. You will now hardly find one acre with Austrian Pine. They have all been killed by *Lophodermium*. We planted thousands of acres with larch (*Larix Europea*) from the inlands of Europe. They were all killed by larch cancer (*Dasyscypha Willkommii*). It seems that the later imported Japanese Larch (*Larix Leptolepis*) from an island climate will go free of the parasite. We tried your white pine, they are all killed by blister rust (*Cronartium ribicola*). We have imported *Pinus Murrayana* and *Pinus Contorta* which in reality are the same specie (lodgepole pine) the former growing on the coast of British Columbia, the latter on the other side of the Rocky Mountains, in an inland climate. The first thrives well the latter is killed by *Lophodermium*, and a moth (*Tortrix buoliana*). I could continue naming examples showing the importance of this question.

The best thing for Canada to do is to collect its own seeds from its own trees, from the same locality where the trees are to be planted or seeded, but collect them from the finest and best specimens of the race. Try to improve your poor race of Black Spruce; avoid cultivating your poor