

farmers in regard to planting forest trees on the farm the better, because unfortunately the farmer has had a great deal to do in the past in cutting down trees in clearing his property; and the revulsion of feeling in regard to trees has not yet taken place, speaking generally, among the farmers. That is, the farmer still regards the tree to a large extent as his enemy; but the younger men and the grandsons are gradually waking up to the fact that it would be important for them to have on the farm a good belt of trees or a good block of trees from which they could draw fuel and wood for other purposes. Fortunately there are still blocks of trees on a great many farms, but on many others there are not. At the Central Experimental Farm, something over twenty years ago, Dr. Saunders, looking ahead, felt that it was very important for us to have on the farm belts of trees of different kinds where we could demonstrate to farmers the rate of growth of different forest trees by taking measurements and also getting information as to the best way for farmers to plant trees either mixed or in blocks by themselves, the best distances apart, and so on. So in the autumn of 1887 the first planting was done and at the conclusion of most of the planting in the fall of 1894 we had a belt of trees about one and three-quarter miles long. Along the western boundary 165 feet wide and along the northern boundary 65 feet wide. In this forest belt, which occupies about 21 acres, we have growing now about 23,000 trees. The forest trees are arranged in different ways. Some of them are planted 10 x 10 feet apart, others 10 x 5 feet apart, others 5 x 5 feet apart, and others only 2½ feet apart, the object being to find out which was the most satisfactory distance to plant. Then the trees are arranged in different ways. For instance, in some places we have solid blocks of white pine, in other places solid blocks of tamarack, in other places solid blocks of black walnut and butternut, in other places solid blocks of ash, and in other places the trees are mixed so as to have different kinds growing together. We have in all about 60 kinds of trees under test in these belts.

By Mr. Sinclair:

Q. Are they all native trees?

A. Not all native. There are some of the hardier exotic trees, but most of them are native trees. We have had, as I say, about 20 years' experience with forest trees and I should like to tell you a little about how they have behaved.

BEST DISTANCE APART TO PLANT TREES.

We have found that by the planting of trees 10 x 10 feet apart it is necessary to cultivate them too long for it to be a profitable undertaking. At that distance apart, unless they are cultivated, the trees make very slow growth for a long time and, therefore, it would not be wise for the farmer to plant them at that distance. We found that in order to get the best results it was necessary to cultivate about 8 years after those trees had been planted 10 x 10 feet apart, that is before they began to meet and smother the weeds and grasses. We found that by planting trees 5 x 5 feet apart we could stop the cultivation in from four to five years, depending upon the kind of tree; and we believe that for the farmer, trees planted about 4 x 4 feet apart, or at the most 5 x 5 feet apart, would be the most satisfactory distance, because at that distance trees would meet in three or four years. We have found too, that planted 5 x 5 feet apart, the branches of the trees began to die much quicker at the bottom, which is very important because you can easily understand that the branches start from practically the centre of the tree, and after they are left on for say 10, 15 or 20 years the knot in the tree comes right through, and as a result your timber is too knotty. But by having them close so that the earlier branches die off in the early history of your plantation it makes a clean trunk and clean wood. That is very important in growing these trees, and that is effected by having the trees closer than 10 feet apart, say 4 or 5 feet apart.