

# FARM AND DAIRY & RURAL HOME

Only \$1.00  
a Year

Vol. XXVIII.

FOR WEEK ENDING NOVEMBER 4, 1909.

No. 44.

## WASTE LAND PLANTING AT HOME AND IN FOREIGN COUNTRIES

Dr. B. E. Fernow, Dean of Forestry, Toronto University

Three reasons why the waste lands of Ontario should be reforested. Some facts as to what France and Germany have done and are doing in the matter of reforesting their waste areas

THE movement that has been started to recuperate some of the lost ground is begun not too early, and, let us hope, not too late.

There are three reasons for beginning now, the recuperation of the waste lands of Ontario. One is that it is poor policy for any community to have lands lying waste instead of producing. There is no need for a rationally thinking citizen to argue this proposition. Another reason is that, extensive as our forest resources seem to be, they are really quite limited, and will soon be exhausted. Hence, by the time these contemplated plantations have grown to useful size, the wood will be needed. The third reason is that it takes a long time for trees to grow to log size especially on such poor lands as are under consideration; hence the need of early beginning.

### TO MATURE TREES

On this point the greatest ignorance prevails. Because some single trees on the lawn have made most rapid progress, you must not believe that a forest of trees will grow in the same manner.

Just to show you what the kind of trees which will grow well on waste lands are doing, I can give you the figures on the rate of growth of Red Pine, as ascertained by our students last spring south of Lake Nipissing. On the best soils this tree grows for the first 100 years as well as the White Pine. In 50 years you may have 13 inch trees that is one inch growth of diameter in 3½ years, but in the next 50 years it grows only an additional five inches in diameter, or at the rate

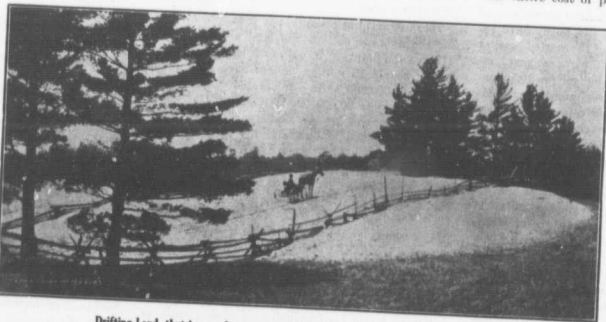
of one inch in 10 years. Then the rate drops to one inch in 20 years, one inch in 30, and finally one inch in 40 years, so that the trees, which a lumberman looks for, of say 20 inches, will be 180 to 200 years old, and the average growth will have been one inch in nine to ten years.

This is on first-class soil. If you investigate the rate on the poorer, not yet the poorest, gravelly soil, where this species is specially at home, you will find that it takes 100 years to make a 12 inch tree having grown at the rate of one inch in six or seven years for the first 50 and one inch in 12 to 14 years for the second 50 years and after that, the rate sinks to one inch in 25 to 30 years and more. Indeed, a lumber tree of 20 inch diameter on this class of soil will have taken 250

to 260 years, or one inch in 12 to 13 years on the average to attain its size.

### TAKES 60 TO 80 YEARS

The White Pine grows very much like the Red Pine for the first 100 years, but on good soil keeps up the better rate beyond that age. Although in plantations they have grown one inch in three years and even in two years for the first 25 years, one inch in four to five years is nearer the average, and not many trees of this species, will exceed 12 inches in 50 years. Well grown trees, 100 years old average at best 19 inches, or one inch in six to seven years, and 20 inches at 110, then the rate falls to one inch in 12 years and stays there for a long time. By good management, however, log trees may be produced in 60 to 80 years.



Drifting Land that is a real menace to Mr. Tebble's Farm in Durham County, Ont.

One of the worst features of the whole situation in the sand lands of Clark Township, Durham Co., Ont., is the way in which good productive soil is being covered up and destroyed for agricultural purposes by means of the drifting sands. The sand shown has come a considerable distance, has filled the roadway where the horse and rig may be seen, and is rapidly approaching on the field in the foreground, covering up and utterly destroying the grain crop sown there. For straw has been placed on the west side of this highway, but it has not been effectual in checking the course of the sand. Five years ago, Mr. Tebble states that this area shows in the photo was all grass, now it is working destruction everywhere. Mr. Tebble says that these sands will be his ruination.

—Photo by the Editor of Farm and Dairy.

It stands to reason that such a "long winded" crop is not attractive to private enterprise, but indirect benefits from government interest to be started, as a work of internal improvement are or merit to undertake it, I do not undervalue the financial result which promises in the end to repay the undertaking with good interest. On this score we have the best proof in the experience of others.

### WASTE LAND PLANTING IN FRANCE

The history of waste land planting in France, which has been done there on a larger scale than anywhere else, is most illuminating. While we may concede that labor conditions especially are

very different in France, nevertheless we can feel pretty certain that results in this country if the work is rationally financed and properly done will be of a like character.

The waste land planting in France refers to five different localities and comprises over two million acres of plantations, the result of a persistent policy for 60 years. The first region are the sand dunes in south western France—250,000 acres—and the so called Landes adjoining, some 2 million acres of shifting sands and marshes like those of Norfolk County, Ont. The fixing of the dunes was begun in a small way as early as 1786 with appropriations of \$10,000 to \$15,000 and finally \$100,000 per annum. By 1817 some 14,000 acres had been secured. Fifty years later, in 1865, 200,000 acres had been reforested, the total expense for planting, administration, etc., having amounted to nearly \$2,700,000 or \$13.60 an acre. Of this area 95,000 acres were then ceded to private and municipal owners for \$2,745,000 (\$30 an acre) and only 105,000 acres remained in the hands of the state. The sales have reimbursed the entire cost of planting and left a profit over and above of \$120,000 and the present value of the State property—these useless sand dunes—secured by the persistent expenditures up to less than three million dollars is estimated at ten million dollars. In 1901 the first cutting was made and yielded \$92 an acre; better than 3 per cent. on the investment. The improvement by ditching and planting of the adjoining Landes of nearly two million acres was begun in 1837 by private individuals, who by 1853 had reclaimed 50,000 acres. Then the government stepped in with a broad gauge plan, building roads, railroads, drainage systems, and assisting the municipalities in reclaiming the land, making planting plans free of charge, the State

itself and private individuals buying some 390,000 acres of the land to enable the municipalities to accomplish the improvements. This once poverty stricken district which a century ago was hardly inhabited—is now traversed by the densest net of railroads in France.

By 1907 with an expenditure of around \$10,500,000 (\$6.50 an acre) 1,750,000 acres were reclaimed, 85 per cent. in forest, of which the state owns somewhat over 100,000, municipalities 185,000 and private owners the bulk of 1,500,000 acres. In 1898 the value of these holdings created from nothing was estimated at over \$96,000,000. In 1892 the average net yield was \$2.40 an acre, and since then has been rising, so that now an annual income of \$8,000,000 is the result. This from an