

increasing annually by \$48. The loans will then in the twenty-fifth year have accumulated to \$55,000 and the interest accumulations to \$26,870 or \$1,075 per year, and the highest last annual charge \$1,650, amounts not difficult to raise. After the planting is finished the annual interest charge remains stable at \$1,650. Now each year 200 acres may be thinned and every five years the thinning repeated. A net result of \$2 per acre for the first thinning (at that time wood prices will be higher) \$3 for the second, and \$3.50 for every subsequent thinning would be a reasonable assumption. In other words for the first five years after loans and planting have been completed the interest charges are met to the extent of \$400, in the second quinquennium to the extent of \$700 and in the third quinquennium a surplus begins to appear. Now arrangements for refunding the load may be made at once, or else merely interest may be continued to be paid out of returns for thinnings, the town receiving small incomes until the sixtieth year, when the first 200 acres may come to harvest yielding not less than \$120,000 (likely much more at that time) wiping out the loan and leaving a property worth several million dollars producing annual revenue.

'All that the state has done is to lend its credit, not one cent is given in charity, and the town has made no expenditure except for the care of the property.

'That these calculations are not chimerical may be learned from the experiences of France.

'Here the state reforested during the last century 200,000 acres of sand dunes at a cost of \$2,000,000. Of this 75,000 acres were sold reimbursing the total cost of the 200,000 acres and \$140,000 to boot, and leaving a property now valued at \$10,000,000.

'In the Landes the state, municipality, and private owners planted nearly 1,750,000 acres at a cost of \$10,000,000, the value of the recovered properties being now placed at \$100,000,000 based on their annual production.

'Some 200,000 acres of poor land, unhealthy useless waste, in La Sologne was planted by a private association at a cost of \$5 per acre. These lands which fifty years ago could not be sold at \$4 per acre now bring in over \$3 per acre annual revenue, being valued at \$18,000,000.

'These are actual results achieved and not fancies or forecasts.'

Dr. Fernow went on to apply this to larger areas. In New England he estimated there were five million acres immediately ready for planting. This on a twenty-five year campaign would necessitate planting 200,000 acres per year. Some planting was now being done but in the face of these figures did present work not look amateurish and inadequate?

Such an area (which was twice the forest area of Bavaria and Baden combined, producing \$10,000,000) planted with white pine at \$10 per acre and properly managed would produce annually its 2,000,000 M feet of lumber worth even at present stumpage prices \$20,000,000 and be an ample supply for any population that might then be located in New England.

Finally Dr. Fernow applied his figures to the United States and pointed out that now the federal government was giving aid to reclamation schemes, good roads, waterways, etc., it would not be out of the way to include reforestation in this list.

In 1970, by which time the most advanced of the forests planted now would begin to mature, Dr. Fernow estimated that the population of the United States would have become 225,000,000, and assuming that the per capita use of timber had decreased to that of England, 14 cubic feet per year, this would require the cut of close to 1,000,000 acres per year of first class forest growing for sixty years at the rate of four hundred feet B M per year. To keep up a continuous supply 60 million acres must be in that producing condition. The probability was that not less than 100 million acres would be required to satisfy all needs for wood materials.

Since less than \$20 per acre would be required for planting and interest account, an annual loan of \$20,000,000 for sixty years,—two dreadnoughts a year—would be ample provision. Dr. Fernow's concluding summary of his plan was as follows:

(1) Each state to ascertain its quota of planting area, classified for systematic procedure in its recovery.

(2) A co-operative financial arrangement by which municipalities may secure the credit of the state, and states the credit of the federal government for the purpose of acquiring and recovering their quota.

(3) State planting to be done on a large scale.

'If I have not developed a very definite and adequate plan to meet our need for wood and timber in the future I hope I have at least opened up a line of thought which may tend to its formulation.'

MR. MALLOCH'S POEMS.

Some requests have been made for information in regard to Douglas Malloch's new book of poems 'The Woods' which was reviewed in the September number of *The Canadian Forestry Journal*. Mr. Malloch is the Associate Editor of the *American Lumberman*, 431 South Dearborn St., Chicago, Ill. The American Lumberman Co. are the publishers of the book, and inquiries in regard to it may be addressed to them.