

A Plan Adequate To Meet Our Needs For Timber.

Synopsis of an Address by Dr. B. E. Fernow at the Annual Meeting of the Society for the Protection of New Hampshire Forests.

Dr. Fernow began by stating that there was probably now nobody who had not grasped the idea that the fundamental object of forestry was to reproduce the forest crop which we had used, and, if possible, in better form. Looking over the United States there was little attempt at reproduction. The population was still growing, and while a reduction in consumption, from the present 250 cubic feet per capita per year to something like the consumption of European countries, was inevitable this change would not be made readily.

Dr. Fernow then quoted from the report of the National Conservation Commission to the effect that the cut was more than twice the annual growth and that there was then (1907) hardly thirty years supply in sight, so there was no time for dilly dallying.

He urged that fire protection and conservative logging would not meet the need as these were concerned with the *utilization* of the existing crop but did nothing to *insure* a new crop.

It was true that fire protection was essential to forestry as no one would invest money with a high fire hazard but fire protection had been so much improved of late years that the time was more propitious for pressing for reforestation.

Holding that, in spite of substitutes, timber would continue to be used and would continue to increase in price, and also that the natural regeneration method of timber reproduction would be found nearly as costly and far less effective than replanting he wished to go on record as holding the opinion that 'our future needs can not be satisfactorily and adequately provided for until we take recourse to planting operations on a large scale.'

Within twenty years the United States would have reached the point where virgin timber in which natural regeneration might still be practiced would be near its end. The country's needs must then be supplied chiefly from the so-called second growth and volunteer growth; and the area capable of restocking only by artificial means would have increased probably to 250,000,000 acres, over half the remaining forest soil. (Dr. Fernow estimated that in 1907 the forest area of the United States was 580 million acres). Then the people would be forced to plant whether they believed in that method or not.

It was useless to expect private enterprise to undertake this task owing to the long time element involved. The railways, needing a constant supply of ties, and paper companies, whose big plants were built with the idea of continuous forest supplies, might embark in tree planting, but Dr. Fernow was afraid that for the rest they would have to abandon the idea of individual endeavor and learn that community interests must be attended to by the community. In the end only the state and the municipality could be expected to provide for a distant future. There were foolish notions abroad as to the distance of that future and how long it took to grow a log tree. With most species in most localities nothing could be expected in less than 60 to 100 years.

He had no cut and dried plan for this except to set every state forester, state commission and forestry association thinking, to make them realize that their business was not only to conserve existing resources but to create new ones, and to recognize that this was a more serious matter than could be met by the distribution of a few thousand trees to private planters; that it required *systematic procedure on a large scale*.

Each state forester should make a canvass of his state to ascertain what lands could be left to private planting and what to municipal or state enterprise. He should work out a plan of state co-operation which might take the form in the case of municipalities, besides furnishing plant material and advice, of pledging the state's superior credit for raising the necessary funds by bond issues for acquiring and reforesting waste lands and in return securing supervisory power for the state. For New England municipal action was perhaps the most promising although in general direct state control might be preferable.

Dr. Fernow gave the following example to illustrate the method of procedure.

'Let us assume that a town has bought 5,000 acres of waste lands, which it could secure for say \$15,000, borrowing the money from the state at 3%; the 5,000 acres to be planted in a 25 year campaign; that is at the rate of 200 acres per year, at a cost of \$8 per acre; the annual outlay of \$1,600 to be furnished by the state from year to year, when the interest charges will be \$450 on the original investment and a series of interest payments of \$48,