

OUR FORESTS AND THE HURRICANE

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The great loss of standing timber caused by the hurricane of September 21, 1938, has served to center interest on forest conditions in the Northeast, and especially on the ways and means of starting new and better forests in place of those destroyed. The extremely small proportion of high quality timber among the hundreds of millions of board feet salvaged since last September and sold to the Federal Government is evidence enough that something is wrong; and it is very certainly nothing more nor less than the way in which we have grown our timber, or, rather, the way in which we have let Nature grow it for us. The main trouble lies right with the owner himself and his failure to apply in the past even the most elementary forestry practices. At least to those who have experienced selling hurricane timber under Government standards it is now clear that henceforth much more thought and care must be given to timber growing, if it is to show a profit.

What can we expect from "old field" or "pasture" pine which owes its origin solely to farm abandonment and which has grown up under the most unfavorable conditions possible as far as quality is concerned? Similarly, what can we expect from stands cut over two or three times during the past hundred years or so under the policy of always cutting the best and leaving the worst? The sum total effect of years of neglect and careless cutting is a deteriorated and depleted forest which does not begin to supply our needs. Our forests are like gardens which have been allowed to grow up to weeds.

Fortunately, it is now known, as a result of twenty-five years or more of research, how to grow high quality forest products. White pine may be used as an example. Pine which seeded in on old fields or pastures has always been characterized by extreme limbliness and crookedness. This is because such stands are practically "pure," that is, composed only of pine, and the trees are free to grow from the start. This freedom to grow unhampered under full exposure to the sun results in large, wide-spreading branches and severe weevil-ing, which causes the numerous forks and crooks so common in our present pine trees. Incidentally, pine plantations set out on open land will have a similar outcome, unless the plants are very closely spaced, and we shall gain little in improved future quality from this source.

By contrast, the high quality pine we once had in the early years of settlement generally grew in mixed stands with hardwoods and other conifers. Generally, early in life each pine was obliged to compete with taller neighboring trees which forced it to grow straight and tall, with small branches. The lower branches died through lack of sufficient light and, because of their small size, the mechanical action of the elements and nearby trees of shorter height effectively carried on natural pruning. Furthermore, as long as the pine remained partially overtopped and suppressed by taller trees, it was free from weevil attack and its hole continued to grow as a single, straight shaft. In time the more vigorous or more favorably situated pines overtook and passed their neighbors and extended their crowns into the space above the level reached by the hardwoods and other species of conifers. In this position the freed crown expanded rapidly and with it the growth rate of wood in the hole. And, since by this time most of the lower branches of the pine had broken off and fallen to the ground, layer upon layer of clear wood was laid down. So it was in the original mixed forests that high quality pine developed.

In the hurricane area many of the pure pine stands of old field or pasture origin blew down, and in their places will arise mixed stands more nearly like the original ones. This is a known fact of great significance. Studies made at the Harvard Forest show that in central New England the stands which follow the clear cutting of old field pine are invariably composed either of mixed hardwoods or of hardwoods and pine, depending upon whether the cutting was done in a pine seed year. Fortunately, there was an excellent crop of ripening seed on the pine at the time of the hurricane, so opportunity now is at hand to restore in a considerable measure the "natural" mixed forests of the past and to produce again the high quality white pine lumber so much prized by earlier generations. Failure to grasp this opportunity wherever it is presented, and, instead, the placing of dependence upon large-scale planting would be a colossal blunder and a huge waste of money.

The one thing above all others needed in the hurricane area is the application of weeding treatments during the next ten to fifteen years, when the young, volunteer stands are in the sapling stage. The early favoring and freeing of the most promising crop trees, of both pine and hardwoods, through the control of weed trees will serve to start the development of fine forests which will far surpass the majority of those destroyed by the hurricane.

Meanwhile the woodland owner should make every effort to clean up highly inflammable slash in order to protect the new volunteer stand of sprouts and seedlings. In this he may be assisted by the WPA, the CCC camps or the Forest Service camps without cost to himself. Through the Government's Agricultural Conservation Program any owner may receive benefit payments for slash disposal, at the rate of \$4 per acre up to a total of \$60. Under this same program farmers may obtain financial aid in such forestry work as planting and weeding. And the extension forester of each state is prepared to give advice in woodland management to all who seek it.

With so much material public aid available, woodland owners in the hurricane area have an unequalled opportunity to start the practice of forestry on a sound and scientific basis.