

Report of Committee on Silviculture, New England Section, Society of American Foresters¹

A Silvicultural Policy for the Hurricane Area

LAST winter your committee planned to present a detailed report on the silvicultural needs of the hurricane area, but this was later found to be impossible, due to the difficulty of bringing together sufficient information on conditions throughout the hurricane area. Furthermore, it appeared that a lengthy report dealing with recommendations for treatment would not be as useful or timely as a more generalized statement bearing chiefly on questions of silvicultural policy.

It is recognized that any plan of forest restoration in the hurricane area is concerned principally with privately owned land and consequently that all the old problems of encouraging the practice of forestry by private individuals and corporations are involved, plus new and more acute problems arising as a result of the hurricane. It is not within the province of the report of this committee to discuss the various plans now in effect or contemplated for public assistance to private owners, such as the educational program of the extension service, the agricultural conservation program with its benefit payments for certain silvicultural operations, the conservation district plan of the Soil Conservation Service, or the proposed so-called leasing bill. The very fact that so much money and effort are being expended to encourage private forestry is evidence of the difficulties with which it is surrounded. In this connection, one cannot help wondering whether these difficulties are associated wholly with circumstances which might naturally result from a long period of forest exploitation, or whether foresters themselves are not, in part at least, responsible for the present notion that forestry is too expensive and uncertain for private enterprise to undertake.

Your committee ventures the opinion that the forestry profession and those connected with it in promoting public education in forestry are to some extent to blame for the present situation. We have attempted to make forestry appear simple, both biologically and economically, by basing it very largely on planting trees on "idle" acres. Planting appears to be a simple operation

to any one who has had experience in gardening or farming, and even those without such experience find it easy to learn how to set out seedling trees on an old field or pasture. But, as is known by those who have tried it, establishing plantations actually requires not only a lot of hard work, especially where the land has to be cleared and the plantation kept free from overtopping weeds, but also a comparatively large cash outlay for planting stock, tools, etc., and a long time of waiting before any return is received on the investment. Moreover, there are serious hazards involved in growing an artificial crop of trees, and serious doubts as to the quality of the timber which most plantations will produce. For example, the small proportion of high quality timber yielded by the hundreds of pine stands blown down by the hurricane has furnished evidence that the common method of growing white pine in pure, even-aged stands will not necessarily result in a high quality product. Many owners who otherwise might become interested in forestry as a source of income have seen or heard of these things and have decided that the chances of making a profit are very slim.

It appears now that we would have been much further along in the practice of private forestry in New England if we had from the beginning emphasized the care and treatment of existing wild stands of good stocking; if we had talked to woodland owners about improvement cuttings, thinnings, and methods of stand renewal by partial cuttings of one sort or another; and if we had adopted the policy of making the most out of what already was on the ground, instead of being so much concerned about planting idle acres. It may be perfectly sound economy to have some so-called idle land on our hands at the present time.

At present, however, so firmly ingrained in the public mind is the conception that forestry is tree planting, that the great majority of people fully expect that any program of forest rehabilitation in the hurricane area will take the form of a large-scale enterprise in planting. It is hardly an exaggeration to say that most laymen still think that any wild forest growth now occupying the land, especially if composed of hardwoods,

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must be cut down and got out of the way before there can be any practice of forestry. In other words, uniformly spaced plantations are apt to be looked upon as cases where scientific forestry is being undertaken, while all other woodland is considered as so much scenery, watershed cover, or recreation grounds. While we all recognize that much that has gone under the name of forestry practice has been for purposes other than profit on timber growing, we must admit that our educational efforts have largely failed to give the public a true understanding of what is involved in the application of silviculture on a sound, long-term basis or to show the woodland owner how to practice forestry in a way which promises to be profitable.

To return to the question of forest rehabilitation, New England is one part of the country where natural regeneration could have, at one time, served practically all the needs of forest renewal; and it remains to be seen to what extent planting, even under present conditions on areas of blow down, is economically justified as against methods of obtaining restocking through natural means, even if much more slowly. Your committee in its report of two years ago discussed the importance of crop security in its relationship to stands of artificial and natural composition, and space will not be given here to repetition. It will suffice to say that the passage of time is showing more and more convincingly the weaknesses of artificial stands and the costliness of combating the numerous destructive agencies to which such stands are especially susceptible.

The committee favors a policy of forest rehabilitation for the hurricane area in which chief dependence will be placed upon natural regeneration, and upon the protection of the remaining growing stock and the young growth which is now becoming established.

While we are waiting for the natural forces of forest renewal to do their work, and for a definite expression of their success or failure in a given case, the outstanding need is for fire protection. The committee favors a policy of thoroughly adequate fire protection during the next several years, or as long as the extraordinary fire hazard continues. Fires occurring during this critical period would destroy the seedling and sprout reproduction on which we must depend largely for satisfactory restocking, not to mention losses to soil fertility. It is believed that the soundest investment of public funds in the

hurricane area for at least the next five years will be for such protection.

At the same time, where conditions warrant the expenditure, it is desirable that the way be paved for the greater success of natural reproduction by the use of such practices as the lopping and scattering of tops, uncovering reproduction, cutting bent over or broken topped saplings so that good sprouts will result, and severing well-rooted but blown over hardwoods before side suckers develop into substantial stems which will in time take space that could be utilized by more valuable trees. Such work would be less costly than the piling and burning of slash, and would serve a double purpose, that is, the improvement of conditions for natural restocking as well as the reduction of fire hazard. This unravelling and flattening of debris should be done sooner rather than later, in order to hasten the development of a well-stocked young stand which in itself will help reduce fire hazard by means of its own shade.

After sufficient time has elapsed to demonstrate the extent and character of natural reproduction, which may be taken roughly as five years after the hurricane for cases which are at all favorable for natural restocking, consideration should be given to the need of supplementary stocking through planting. Great care should be taken to avoid underestimating the present or expectable quantity of natural reproduction. There are numerous cases in this region of plantations set out some years ago and now completely overtopped and suppressed by volunteer reproduction. Nearly every forester has made the mistake of planting too soon, of putting in trees where, as it later turned out, they were not needed. Where planting is resorted to, careful consideration should be given to questions of stand composition, form and density in order to develop a healthy and high quality crop. Unquestionably, there are many places, particularly on the lighter soils and drier sites, where planting will be the only quick means of reforestation; but it is under such conditions that private forestry will in most cases be least profitable and longest delayed.

There can be no doubt that a few years hence there will be thousands of acres which would benefit greatly by the application of weeding and similar treatments. In general, weeding should be delayed as long as possible without unduly suppressing or injuring those elements which are to be favored for the main crop. There will be

few cases where weeding will be needed inside of five growing seasons after the hurricane, and in most cases it will be advantageous to wait as long as ten years. In weeding natural stands, as in crop establishment through planting, questions of composition come prominently to the fore. It is hoped that special attention will be given during the next few years to this important subject in its manifold relations to soil fertility, crop security and financial outcome, to the end that the new managed forests in the hurricane area will be more thrifty, more easily protected and maintained, and more profitable to own than many of those which blew down.

There should be a greatly enlarged interest in the methods of growing high quality timber, especially where it is largely a matter of technique rather than of greater expense for crop establishment and development. The outcome of our recent salvage operations should convince us of such a need. Fortunately, a good deal of information on the methods of growing high grade timber is already at hand, even though not put into practice to any appreciable extent. The publication of such material by those individuals or agencies which have it would be most timely. While there has been a slow, yet very definite swing towards favoring the more complex natural mixtures and stand forms, under which conditions such species as white pine yielded higher quality lumber than when grown in pure, even-aged stands, the general public still has the idea, probably inculcated by forestry propaganda in the past, that foresters give general approval of even-aged plantations and that they will produce good quality timber and will definitely pay dividends. We must admit that there is still a lot of sentiment, some misrepresentation and certainly a lack of sound economics in New England forestry today. This committee believes that the soundest and most profitable forestry will eventually come about through the organization of groups of private owners who are not only living on the land but who make their liv-

ing from the land. A great deal which now passes for forestry on publicly owned lands, especially where a large supply of relief labor has been available for silvicultural work, will find no place under conditions of private management for profit.

Although this committee has intentionally avoided consideration of how the necessary technical advice and guidance can be provided in the rehabilitation of the forests of the hurricane area, or what plan of public assistance to private owners will be most effective in encouraging forestry practice, it is realized that these are matters of the greatest interest and concern. Rehabilitation offers a problem much more difficult of solution than the salvage of the merchantable timber destroyed by the hurricane. Obviously, the timely and proper treatment of only a small part of the volunteer stands which will come in on areas of blow down would require the supervision of a great many competent foresters and the expenditure of large sums of money for cultural treatments. No matter what we may say or recommend as to silvicultural policy, the carrying out of any large-scale program of silviculture is faced with serious difficulties and imposing obstacles which we must attempt to overcome without too much delay. The present situation resulting from the hurricane offers a challenge and an opportunity such as have never been ours before. It cannot be met by letting nature take her course. Only by the investment of a great deal of labor and technical skill can the forests of this part of New England be prevented from sinking to a still lower level of productiveness.

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