

MASSACHUSETTS FORESTRY ASSOCIATION



SILVICULTURE FOR COUNTRY ROADSIDES

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A Suggestion to Tree Wardens and Highway Surveyors

ALONG most country roads there is a strip of unused land between the edge of the road bed and the boundary of the right of way which requires, from time to time, a good deal of attention especially for heavy loaded traffic. It then becomes necessary for the road crew or tree warden to "brush out" the roadside. The ordinary way of doing this is, to a large extent, a waste of money, because the

improvement brought about is only temporary, and when the next operation falls due, it is more costly than the first.



VIEW NUMBER ONE

View Number One shows a typical roadside immediately after the highway surveyor has finished "brushing it out." As the picture shows, all vegetation is cut clean from the road to the boundary of the right of way. In some towns, the material cut is left where it falls or half-heartedly thrown back, notwithstanding the fact that the law requires it to be disposed of as a precaution against fire. Furthermore, the appearance of the roadside is anything but improved and the

from the local tree warden or highway surveyor. Except in thickly settled neighborhoods, these roadside strips, commonly about a rod and a half in width, grow up to a tangle of woody vegetation which, in its early stage, is usually known as "brush." From time to time these thickets grow and spread to such an extent as to restrict the use of the highway,

prospect of any effective shade is postponed a number of years. These results, however, are not the most important, either from the point of view of town finances, or the traveling public.

View Number Two shows how such a roadside looks three years after it has been "brushed out." Practically all the woody vegetation which was cut

in the process, has sprouted from the roots, sending up several stems where one grew before. The most worthless, such as grey birch, alder, or poplar outgrew all the more desirable and long-lived species, and the general rate of growth of the new thicket is



VIEW NUMBER TWO

from two to five feet per year. Thus in so short a period, there is an even denser barrier beginning to crowd the road, and the species which compose it are still more predominantly of the kinds that could never make a desirable roadside tree.

What are the objects to be aimed at in the public care of a country roadside? For the ordinary small town, perhaps the first is economy, a condition which, while admitting the best use of the highway, can be maintained with the least expense. Taking the whole year together, there are a number of seasonal and climatic factors that must be considered. In winter, it is desirable that the road should hold whatever snow may fall and yet be free from drifts. For teamsters much on the road, a certain amount of shelter is also welcome. In spring, a road should be enough exposed to sun and wind to dry out quickly. In summer, whatever tends to reduce the washing due to heavy thunder showers, and to

prevent the formation of the deep dust that comes in long, dry spells, is a good thing. Finally if all these favorable conditions can be attained, it is surely worth while to have a roadside that is pleasant to travel along and attractive to look at. All these benefits can be secured if the natural vegetation, instead of being fought, is intelligently favored.

View Number Three shows what may be expected if this is done. This road has not required the expense of a dollar in keeping down brush for the past fifteen years. And even the road bed itself has been conspicuously more durable by reason of protection from weather. On this roadside, there are just enough trees to make a complete shade for the ground beneath, without covering the road itself. The effect of this has

been that all the small vegetation, weeds, and underbrush has been killed by the continuous shade, **which is the only practicable way in which such growth can be killed.** The existing trees are sufficiently free from lower branches to allow some air circulation across the road and to make it possible to see out on each side across the country. All the snow that falls lies level without drifting, and does not melt off nearly so rapidly during a thaw as where no trees exist. Lastly, the road is shady in the summer, and sheltered in the winter, and it is largely self-maintaining—as to the roadside alone, wholly so. Once such an arrangement of trees is established, it should keep the roadside in satisfactory condition for fifty years.

To bring about these conditions, it is not necessary that the official in charge of the roadsides should go to any additional expense, but merely that he should leave standing a sufficient number of the right

kind of trees so that in time the two sides of the right of way will be continuously shaded. Anyone who takes the trouble to examine carefully a roadside thicket will discover that there are almost always mixed up and partly concealed in the general vegetation a considerable number of seedlings and small saplings of the different kinds of forest trees. It is chiefly because many of them are slower growing in early life than the worthless species that they are so apt to be at that time unrecognized. The only additional cost in "brushing out" a roadside properly is the labor of picking out and marking the trees which should be left standing. Where the general average of the growth is less than ten feet high, the aim should be to leave enough trees on the strip, so that they will not be more than fifteen feet apart, and scattered fairly evenly over the road and a half of roadside. When these trees have reached a height of forty to fifty feet, there will, of course, be not more than half as many in thrifty condition. The object of leaving them closer together at the outset is to bring about, as early as possible, the complete overhead shade that will begin to kill out underbrush. Under these circumstances, it would be a good thing to cut out about half the number of trees originally left, soon after their tops have begun to interlace. Nevertheless, if this is omitted as being too costly, the trees will gradually thin themselves and steadily maintain shade for the ground.

A good way to manage the first cutting is for the foreman to tag the trees that are to be left standing, by tying on small bits of rag or colored string. These trees should be trimmed up at least as high as a man can reach, and none should be left standing within three feet of the edge of the road. With these restrictions, it is simple for the crew to cut

out all the rest of the trees and underbrush. If a second cutting should have to be made within four or five years, the trees left in the first operation will, by that time, be large enough to be recognized and spared without marking.

Not all species are equally desirable as roadside trees. They differ as to their habit, rate of growth, permanence, resistance to insects and disease, and effect upon the road. White ash and red maple, for example, are not eaten by the gypsy moth, and are otherwise apt to last well on the roadside. Less resistant but good are elm, sugar maple, beech, yellow birch, and red oak. Grey birch is not desirable because it is easily bent over by snow and sleet so as to obstruct the road. Poplar, though better than nothing, is a short lived tree and subject to fungus disease. Chestnut is no longer worth counting on, because practically certain to die of the prevalent chestnut disease. White pine is an excellent species for a

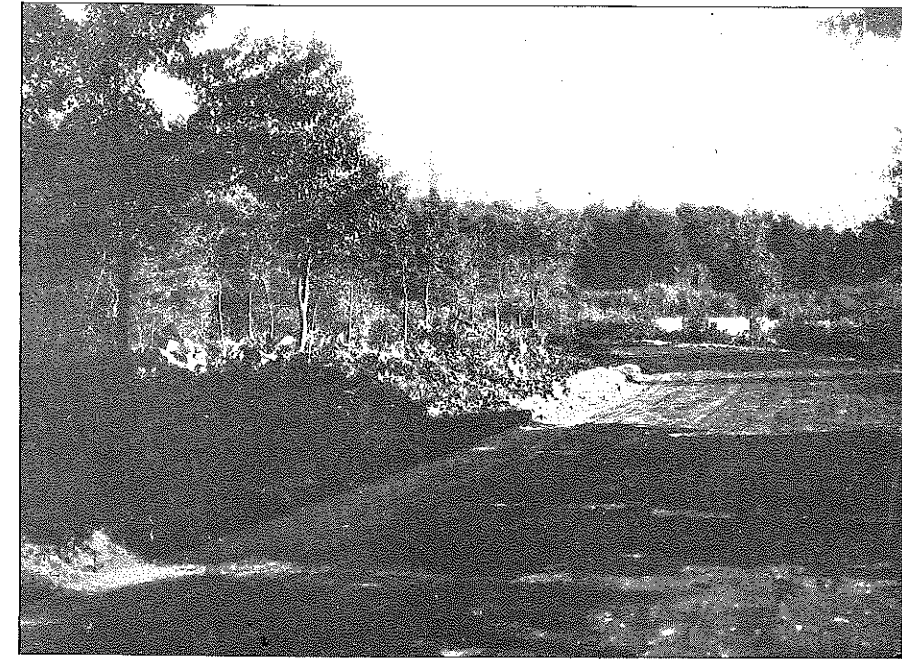


VIEW NUMBER THREE

roadside, but should not be allowed to grow near enough to hang over the road itself. White pines which overshadow the road prevent much snow from reaching the ground, and cause troublesome bare spots long after there is good sledding elsewhere.

The same is true of other evergreens, all of which are but little attacked by leaf-eating insects and generally hardy. However, in the country districts, the choice of species is not of the first importance. The essential thing is to provide enough fairly long-lived

trees to make overhead shade for the ground, and thus to avoid the frequent expense of keeping down underbrush and sprouts. View Number Four shows a roadside just after having been treated according to this method.



VIEW NUMBER FOUR

In preparing this article for the Association, Professor Fisher had in mind primarily, the work of the Tree Warden and the Highway Surveyor, but we believe that many of our members and others can apply these principles to good advantage to private ways and other places where "brushing out" is required.

At this time when municipalities are economizing in every way possible, probably little money will be spent, in planting roadside trees, but some brush cutting will have to be done. Proper thinning of brush in most cases is equivalent to planting trees. Therefore, we feel that this article is timely, and should be given careful consideration by those in authority in towns.

To many people, a tangle of wild growth along a roadside is more attractive than rows of planted trees, but in these days of rapidly moving vehicles, this scheme for roadside adornment is impracticable especially on narrow and winding highways. Even our beautiful back woods roads are now frequented by automobilists, and the public is beginning to demand legislation to provide for clearing the roadside of brush, for the safety of travelers.

The application of silviculture to our roadside problems, will we believe prove a happy compromise between those who would have nature take its course and those who would have the right of way cleared of woody vegetation. The informal grouping of trees which will result from the practice of these principles will greatly improve the landscape along our country roads where repeated "brushing out" too often leaves the roadsides ragged and unattractive.

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