

attractive to the farmer who must of necessity count on an early return from his investment. The only natural forest tree in Canada which may be cropped while it is slowly growing to maturity for lumber is the maple tree. This may be tapped with profit for the production of maple sugar after it has grown to the size of six or eight inches, and so provide a revenue long before it is large enough to give the best returns as lumber. In twenty-five or thirty years after a tree the size of a broom handle has been transplanted, it should yield a very profitable return for the time and money invested.

The most suitable locations in this Province of Quebec for maple groves are along the ridges and hillsides, and it is not difficult to find many hillsides gradually sloping, which have been cleared or partially cleared, and are now grown up to thickets of hardwood, in which maple largely predominates. Mr. R. H. Campbell, Director of the Forestry Branch of the Department of the Interior, concludes an interesting comparison between the pine tree and the maple tree as follows: 'When one considers the revenue derived after the thirtieth year from the sap, and the higher prices obtainable for thinnings as fuel, or making acetic acid, wood alcohol and charcoal, there seems but little doubt that the maple would in the end be the more profitable tree. This is particularly true in the case of the small wood-lot owner, or farmer, who has many uses for the wood, and especially where the maple already exists in the stand and natural reproduction can be secured.'

Let us examine this problem of a maple orchard ideal in location, arrangement and outfit for producing maple sugar of the highest quality at the lowest possible cost. To produce an article economically is, of course, to produce it in fairly large quantities. It is, therefore probably

wise to develop as large an area as possible in one sugar orchard. The chief expense in administering a sugar orchard is in gathering the sap from tree to tree. The quickest and most economical method of doing this is by gravity through a system of pipe lines. The orchard preferably should be placed around a sloping hillside, not too rough or steep for the necessary road where teaming is needed, and this entire slope should focus at some point lower down, where the sugar cabin and storage tanks should be placed.

It is not difficult to find in this Province of Quebec many suitable areas in which more than 30 or 40 acres of hillside are tributary to a suitable point for a sugar cabin. If we take, then, for illustration, a unit of thirty acres, sloping preferably to the east or southeast, we would in time be able, by proper planting, to have an orchard of 4,000 trees or more, estimating 133 trees per acre. This should mean 4,000 buckets, or, perhaps, more, if some trees are large enough to permit of more than one bucket. If this area contains maple trees already, it simplifies the undertaking very much, as it will not be necessary for the owner to wait twenty-five years for the full maturity of his orchard. If the other varieties of wood are first cleared out, and the vacant places filled by planting young maples where necessary, the orchard will go on improving year by year.

In considering the economical administration, small subsidiary cabins should be built at convenient points to allow for the storage of tanks, covers, spouts and piping, each cabin to contain from 500 to 1,000 buckets. This facilitates tapping in the early spring, when the snow is deep and the transportation is difficult. With a system of two-inch galvanized sheet iron pipe in 10 ft. lengths, which can be placed in position on a series of posts, or suspended from a