

Of the total forest area 9.6 p.c. has been permanently alienated, being owned in fee simple by private individuals or corporations. On 13.2 p.c. of the area the Crown still holds title to the land but has alienated the right to cut timber under lease or licence. So far 77.2 p.c. has not been alienated in any way. It may be said that 90.4 p.c. of Canada's forest area is still owned by the Crown in the right either of the Dominion or the provinces and, subject only to certain temporary privileges granted to limit holders, may at any time be placed under forest management and dedicated to forest production.

Volume of Standing Timber.—In 1931 the total stand of timber in Canada was estimated to be approximately 214,477 million cubic feet, of which 167,636 million cubic feet was of coniferous species and 46,841 million cubic feet of broad-leaved species.

During the years 1926-30 the average annual depletion due to use was approximately 2,000 million cubic feet of conifers and 900 million cubic feet of hardwoods. The average annual loss from fire is estimated at 247 million cubic feet of conifers and 60 million cubic feet of hardwoods. Though no widespread epidemics of insects or fungous diseases have occurred in recent years, local infestations which cause considerable loss develop practically every year. In 1931 in Nova Scotia the balsam suffered severely from "gout" induced, it is believed, by minute sucking insects of the genus *Dreyfusia*, previously undescribed. In the Gaspé peninsula the spruce saw-fly became a serious menace. In the absence as yet of any basic data on which to estimate the depletion from these causes, it may be taken as perhaps 800 million cubic feet. The total annual depletion during the five-year period is therefore estimated to have been about 4,000 million cubic feet. To what extent this loss has been replaced by growth increment is not known, but, considering the preponderance of the younger age classes in the reproduction, it is believed there has been a considerable net depletion in the merchantable age classes.

Another real difficulty being met with is the matter of dividing the existing stand into merchantable timber and that which is inaccessible or unprofitable, since merchantability depends not only on the location but on the density of the stand, the demands of the market for certain species or qualities of product, and the regulations governing cutting. Light stands covering large areas may in the aggregate carry very large amounts of timber and still not be exploitable at a profit. For some species, such as aspen and white birch, which comprise three-quarters of the hardwoods, there is very little demand, and therefore these cannot properly be classed as merchantable, though accessible as far as location is concerned.

In June, 1929, a conference of the Dominion and provincial forest authorities was held in Ottawa and it was decided to undertake a national inventory of the forest resources of Canada, each authority conducting the necessary stock-taking surveys on the land under its jurisdiction. In connection with the inventory definite data are being secured regarding the depletion due to use, fire, insect damage, etc., and the increment accruing. Five years was set as an objective for the completion of an inventory of at least the more accessible parts of the area.

This national inventory, which is being organized under the direction of the Department of the Interior, and related studies of increment and decrement should shortly begin to throw new light on many problems.

Under present conditions it is doubtful whether more than 100,000 million cubic feet of conifers and 15,000 million cubic feet of hardwoods can be considered as merchantable.