

Of the total forest area, 8.5 p.c. has been permanently alienated, being owned in fee simple by private individuals or corporations. The Crown still holds title to 12.9 p.c. of the area, but has alienated the right to cut timber thereon under lease or licence. So far 78.6 p.c. has not been alienated in any way. It may be said that 91.5 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 1935, the total stand of timber in Canada was estimated to be approximately 273,656 million cubic feet, of which 222,076 million cubic feet was of coniferous species and 51,580 million cubic feet of broad-leaved species.

During the ten years 1926-35, the average annual depletion due to use was approximately 2,034 million cubic feet of conifers and 547 million cubic feet of hardwoods. The average annual loss from fire was estimated at 241 million cubic feet of conifers and 26 million cubic feet of hardwoods. The loss from attacks of insects and fungi can only be estimated in a broad way, but it is placed at 700 million cubic feet annually for the ten-year period. In Nova Scotia, in 1931, 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 has become a serious menace, spreading to New Brunswick and as far west as Ontario. The total annual depletion during the ten-year period was, therefore, estimated to have been about 3,558 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 To what extent this loss has been replaced by growth increment is not known but, considering the preponderance of the younger age classes in the reproduction, it is believed there has been a considerable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 is the division of 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 as to 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, data are being secured regarding the depletion due to use, fire, insect damage, etc., and the increment accruing. The Forest Service of the Department of Mines and Resources acts as a clearing-house for the national inventory, and in addition to collecting and compiling the data furnished by the provincial authorities has conducted the inventorial work in the Prairie Provinces and the Maritime Provinces. The inventories for Manitoba and New Brunswick have been completed. The Dominion Service is also carrying on extensive surveys to determine the increment taking place in the forests and conducting more intensive silvicultural research at forest experiment stations located in New Brunswick, Quebec, Ontario, Manitoba, and Alberta.