

Since its beginning in 1900, the Canadian Forestry Association has played an important part in securing popular co-operation in reducing the fire hazard. By means of its magazine, which has a circulation of over 16,000, by railway lecture cars and motor trucks provided with motion-picture equipment, and by co-operation with radio broadcasting stations and the press, the Association reaches a large proportion of the population of the Dominion. Special efforts are made through the schools, by specially appointed junior forest wardens and other means, to educate the younger generation as to the value of the forests, the devastation caused by fire and the means of preventing such destruction.

### Subsection 3.—Scientific Forestry

The great forestry problem is the management of Crown forests, first under provisional and later under more intensive working plans, so as to ensure a sustained yield. Forest research activities in this direction are now assuming great importance. The Dominion Forest Service operates 5 forest experiment stations with a total area of 227 sq. miles. Here investigations of the underlying principles governing the growth of forests are made and practical methods of management are tested.

About 400 technically trained foresters are employed by the Dominion or provincial forest services or by paper and lumber companies. A considerable number of foresters are actively engaged in commercial logging operations. In addition to administrative work, these men carry on forest surveys either for the estimation of timber-stands and making of maps, or to determine natural growth and reproduction conditions and factors. An outstanding development of recent years has been the extensive use of aerial photography for forest surveys. With the co-operation of the Royal Canadian Air Force and the Topographical Survey, the Dominion Forest Service has taken a leading part in the development of means for the interpretation of the photographs for forestry purposes, but most of the provincial forest services and many of the timber-owning companies make extensive use of aerial photographs. It is now possible not only to map the areas covered by the various forest types but to estimate the volume of standing timber with an accuracy that compares favourably with ground surveys. Over 950,000 square miles have now been photographed in Canada and of this area forest maps have been prepared for 110,000 square miles.

*Research Work in Forestry.*—In a special article on Scientific and Industrial Research in Canada, which appears at pp. 979-1012 of the 1940 Canada Year Book, a comprehensive review of all phases of scientific research work being undertaken by the various Government Departments is given. Specifically at pp. 993-995 research in forest economics, silviculture, forest fire protection and forest products appears. It is not possible to spare space in each Year Book to reproduce this material and the reader is referred to that article for current information. As soon as progress makes it advisable, this article will be revised.

## Section 6.—Forest Utilization

### Subsection 1.—Woods Operations

Differences in forest conditions throughout Canada give rise to differences in logging methods. Generally speaking, throughout Eastern Canada the climate is such that the cutting and hauling of logs can be carried on most economically during the fall and winter months. Connected systems of lakes and streams make it possible in most cases to float the logs from the forest to the mill at a minimum cost