

A total of 178,000,000 trees have been planted, 22,000 acres have been seeded, and 15 new forest nurseries have been established under the federally-supported reforestation programmes.

In 1957, agreements were entered into with all provinces providing federal contributions toward provincial capital expenditures on forest-fire protection. In addition, the costs of hiring aircraft or boats for fire protection are sharable. Large quantities of protective equipment have been bought and there has been marked improvement in facilities for detecting and reporting forest fires. The greatly intensified use of aircraft in recent years, especially for water bombing, has been largely financed under the federal-provincial agreements.

Financial assistance for the construction of forest-access roads, which are of prime importance in a wide range of forest-management applications, was first offered to the provinces in 1958. Since that year, more than \$12 million have been contributed by the Federal Government towards the construction of forest roads, trails and airstrips.

In 1961, an agreement consolidating the various areas of shared-cost forestry undertakings, including stand-improvement projects, was offered to and accepted by all the provinces.

Since 1951, the Federal Government has contributed \$32.2 million to the provinces under these general forestry agreements, and an additional \$5.5 million under special agreements, notably for aerial spraying of spruce budworm in New Brunswick. The period covered by the agreements is one in which the most rapid advances towards intensive management of Canada's forest resources have been made.

Forest Research

Forest research in this sense does not include forest entomology and pathology research but refers primarily to studies carried out in silviculture, forest management, ecology, and related subjects. There are several Canadian agencies engaged in this work besides the Federal Department. For instance, professors at each of the four Forestry Schools carry out certain investigations in connection with their teaching. Some of the provincial forest authorities have research divisions. Also, provincial research foundations, as well as the National Research Council, provide financial assistance for special projects. The Woodlands Department of the Pulp and Paper Research Institute of Canada, located near Montreal, studies particular problems of harvesting and managing pulpwood forests facing member companies. Several of the larger pulp-and-paper companies assign one or two officers to small research projects, usually on a part-time basis.

The largest single organization responsible for this type of research is the Department of Forestry. Through its Forest Research Branch, it carries on comprehensive studies in the fields of forest management and forest-fire control from seven regional establishments and five research stations across the country.

Forest-management research by the Department has two main objects: to gain an understanding of trees and forests according to their inherited characteristics in relation to their environments, and to develop and improve methods and techniques for measuring, manipulating and controlling forest and forest environment to serve man's need efficiently. Forest-management research embraces four broad areas - silviculture, mensuration and surveys, tree biology and forest land. These types of research share the common aim of making possible the maximum quality and quantity of production from forests and forest land.