

Silvicultural Research includes investigations necessary to determine the best methods of treating growing stands and of harvesting forest crops. Most of these experiments have to be carried on continuously for many years before final answers can be obtained. This is so because it takes a long time for a tree to grow from a seedling to saw-timber size. To provide the necessary control of areas where such experiments are carried out, five forest experiment stations are maintained in different forest regions of the Dominion. The locations and areas of these stations are as follows:-

<u>Name of Station</u>	<u>Location</u>	<u>Area</u> Sq. Miles
Acadia F.E.S.	near Fredericton, N.B.	35
Valcartier F.E.S.	Valcartier, P.Q.	7
Petawawa F.E.S.	Chalk River, Ontario	97
Riding Mountain F.E.S.	Riding Mountain Nat. Park	25
Kananaskis F.E.S.	Seebe, Alberta	62

These stations are well equipped with buildings, roads, lookout towers and so forth, essential for administrative purposes. Their value for research purposes makes it necessary to provide very intensive protection against damage by fire or other causes. In addition to silvicultural experiments the forests on the larger stations are used to demonstrate methods of forest management and the stations also serve for purposes of research in connection with protection against forest fires, injurious insects, and tree diseases.

Forest Protection. The Dominion Forest Service annually compiles classified statements respecting forest fire losses throughout the Dominion from information supplied by the provinces. From these it is possible to trace the trends of fire damage in Canada as a whole and in different regions of the country. Extensive investigations have been made into methods for measuring the degree of fire danger or fire hazard that exists at any given time and for forecasting probable hazard for short periods in the future. This work is of great importance to organizations actually engaged in forest protection work, and the Wright system of measuring hazard, as developed by the Dominion Forest Service, is now in use in several provinces.

Forest Products Research. Forest Products Laboratories are maintained by the Forest Service at Ottawa and Vancouver, and in addition the Dominion participates with the Canadian Pulp and Paper Association and McGill University in the operation of the Pulp and Paper Research Institute whose laboratories are in Montreal.

The Forest Products Laboratories study the characteristics of all Canadian woods and are constantly engaged in a search for more effective methods of manufacturing and using wood products. Some of the principal lines of investigation are timber testing, wood preservation, lumber seasoning, timber physics, timber pathology, and wood utilization. Particular attention is paid to investigations likely to lead to the reduction of waste in manufacturing processes. Many of the projects undertaken are carried on in close co-operation with the wood-using industries.