

pulp and paper and improvements in their quality have resulted from the development by the Laboratories of better control equipment, as for example, the Canadian Standard Freeness Tester and the Johnston Screen Classifier. Through researches carried out in the spraying or dipping of wood in chemicals toxic to wood destroying and wood staining organisms losses on this account have been very greatly reduced. Important advances have been made in the technique of lumber drying and particularly in the design and operation of lumber dry kilns. The work carried out by the Laboratories in determining the mechanical and physical properties of Canadian woods has been of great benefit in the construction industry in Canada and has been particularly valuable in establishing export markets for Canadian timbers. The Laboratories have taken a prominent part in the standardization of grades of timbers and in the revision of timber specifications in building codes.

Universities and Other Agencies.—Education in forestry and opportunities for research are offered by four Canadian universities. The University of Toronto, the University of New Brunswick and the University of British Columbia provide four-year courses leading to a professional degree. The School of Forestry and Surveying in connection with Laval University at Quebec provides, in the French language, a combined course of four years duration leading to diplomas in both sciences. The Government of Quebec has established a school in paper-making at Three Rivers in the heart of the paper industry; several agricultural colleges provide short courses in farm forestry and a school for forest rangers has been established at Berthierville by the Quebec Forest Service.

The practice of forestry by individuals and private concerns is encouraged by the furnishing of expert advice by Dominion and provincial services and by the distribution of tree-planting material. The Dominion Department of Agriculture maintains two nurseries in Saskatchewan, one at Indian Head and the other at Sutherland, near Saskatoon. Over 7,000,000 trees are distributed annually to farmers and ranchers in the Prairie Provinces for planting woodlots and wind-breaks. If certain conditions are fulfilled, the material and instructions are provided free except for transportation charges. A total of over 125,000,000 trees has been distributed.

The province of Ontario provides material under similar conditions and distributes to woodlot owners at least 7,000,000 trees annually from its five nurseries. As many more are being provided for the creation of county forests, demonstration forests and plantations on denuded Crown lands. To encourage the establishment of communal forests by towns and other municipalities, the Provincial Government undertakes to plant, free of charge, any area purchased by the municipality for this purpose. The Government also assists counties that purchase areas of not less than 1,000 acres of land for forest purposes. As a result of these inducements there are at present, scattered throughout the province, 50 communal forests (owned by municipalities) and eight of the larger county forests. Farm land used for forestry purposes, while so used, is exempt from taxation up to 10 p.c. of the total farm area but not exceeding a total of 20 acres.

In Quebec, a forest nursery at Berthierville serves as a demonstration station for the School of Forestry and as a location for the forest ranger school. It provides trees for sale and distribution in the province, comprising seedlings and transplants for forest planting and larger trees for ornamental purposes. The capacity of the nursery is about 10,000,000 trees. Provision is made by legislation for the creation of communal forests and there are now 76 of these, covering 594,059 acres.