

land and some natural seed areas have been established for nursery stock. Seedlings are supplied to farmers for shelterbelts and woodlots and to commercial Christmas tree producers and an average of more than 3,000,000 are planted each year in reforestation projects on Crown lands. The program of forest stand improvement comprises thinning, clearing and chemical spraying to remove undesirable species and encourage growth of preferred trees. Forest inventories cover about 5,500 sq. miles annually and, on the basis of these inventories, working plans with annual allowable cuts on a management unit basis have been brought into operation.

Timber-cutting rights are awarded by Forest Management Licences, Timber Sales and, in certain cases (particularly for salvage operations), by Timber Permits. Forest Management Licences may be granted for periods of up to 20 years and are renewable; Timber Sales may be for varying periods from one year upward and Timber Permits for periods of up to one year. At present, one long-term Pulpwood Berth with an area of 2,745 sq. miles and 10 long-term Timber Berths, all granted prior to 1930, are in force. A second Pulpwood Berth agreement was signed early in 1966, covering the construction of a pulp mill and sawmill at The Pas in northern Manitoba.

The area of the province under forest fire protection is 128,370 sq. miles with zones of priority established in the less accessible areas. Fires are detected through a comprehensive network of lookout towers and supporting air and ground patrols, all tied together by radio and Departmental or public telephones. Two Canso water-bombers and two helicopters are rented for the worst of the fire season to supplement the nine aircraft of the Manitoba Government Air Service.

Manitoba co-operates with several federal services which maintain two research areas in the province, and works closely with federal authorities in investigating and controlling forest damage resulting from insects and diseases. Public education in the fields of fire prevention and forest conservation is carried out and use is made of all usual methods including radio, television, newspapers, signs, talks to school children and club members, film tours, etc.

Saskatchewan.—The forests of Saskatchewan are located mainly in the northern half of the province and cover 117,738 sq. miles, or 53 p.c. of the total land area. Provincial forests constitute approximately 92 p.c. of all forest land in the province and are managed and developed by the Forestry Branch of the Department of Natural Resources.

The Forestry Branch, consisting of five divisions—Administration, Fire Control, Forest Management, Inventory and Silviculture—is responsible for developing and evaluating forest policies and management programs. The responsibility for carrying out such policies and programs is borne by the various regional administrative authorities. For purposes of resource administration, the province, with the exception of the most northern portion, is divided into three regions, each under the supervision of a regional superintendent. The regions are subdivided into conservation officer districts which vary in size according to resource base and population to be served. In the most northerly part of the province, because of various special programs with northern residents, resource administration is the responsibility of the Northern Affairs Branch of the same Department. Close liaison is maintained between the Forestry Branch and the various regional authorities.

A major responsibility of the Forestry Branch is the development of techniques in the prevention, detection and suppression of forest fires. A network of 73 lookout towers equipped with two-way radios is maintained throughout the province and is supplemented by three aircraft on regular patrol duty during the high-hazard periods. Northern Saskatchewan's communication system, with more than 990 two-way radio sets in operation in towers, vehicles, aircraft and forest camps, plays a vital role in the detection and suppression of forest fires. These activities are assisted by the use of three helicopters and seven aircraft equipped for water dropping.