

Technology. It also conducts in-service training programs for all the Branches in the Forest Service and other divisions of the Department.

Basic research in all phases of the forestry program is generally carried out by the Canadian Forestry Service. A new federal research laboratory has been completed in Edmonton to improve the research service that is provided.

**British Columbia.** Over 215,744 sq miles or 60% of British Columbia's total area, is inventoried as forest land. This includes over 276 MM cu ft of mature merchantable timber, most of it coniferous species. Ninety-five percent of the provincial forest land is publicly owned and managed by the British Columbia Forest Service, the forest administrative agency for the province. For administration and management purposes, the province is divided into six forest districts with headquarters at Vancouver, Kamloops, Nelson, Williams Lake, Prince Rupert and Prince George. Further decentralization of authority is effected by subdivision into over 100 ranger districts. Each district is supervised by a forest ranger who supervises the harvesting of trees by logging companies and plays a vital role in environmental protection. Ten directional, servicing or policy-forming divisions constitute the head office of the Forest Service at Victoria: Timber, Reforestation, Protection, Inventory, Research, Engineering, Personnel, Information, Accounts and Grazing.

Efforts continue to bring BC's forest resources under sustained-yield management even though with an annual scale of approximately 24,768,581 cunits (1973) the total inventory would appear sufficient to support current needs in perpetuity. One of the results of sustained-yield administration has been the swinging of a greater proportion of the annual forest harvest to the interior of the province; in 1973, the wet belt forests on the coast accounted for about 46.7% of the total forest cut and the interior for 53.3%. For all practical purposes, the entire interior forest is publicly owned; a large proportion of the privately owned, leased or licensed forests is on the coast. Several systems of timber disposal are in effect. The Tree Farm Licence is a contract between the government and a company or individual whereby the latter agrees to manage, protect and harvest an area of forest land, including any privately held forest land, on a sustained-yield basis. Tree Farm Licences are subject to re-examination for renewal every 21 years. Public Sustained-Yield Units are areas within which the Forest Service manages the Crown timber on a sustained-yield basis. Within the Public Sustained-Yield Units, recognized established logging operators can apply for Timber Sale Licences or Timber Sale Harvesting Licences which entitle them to log at a given rate per year, based on a number of factors including the operator's average rate of production at the time the unit was established.

Forest fire prevention techniques and organization for effective forest fire suppression are vital aspects of planned sustained-yield management. Extensive use is made of aircraft under various terms of contract. Air tankers and fire-spotter aircraft are employed during the fire season and helicopters and other aircraft are employed under contract for patrol duties and for the transport of fire suppression crews. The rugged topography and the many remote and sparsely populated areas of the province demand the availability of a variety of transportation methods to achieve early discovery of and attack on forest fires.

Close liaison with the Canadian Forestry Service of the federal Department of the Environment through facilities at Victoria provides detailed information on insect and fungal enemies of the forest and on fire research.

In order to achieve an orderly and efficient administration of multiple use of Crown forest lands, the Forest Service, in conjunction with other government departments, has recently developed the "Integrated Use" concept. The Forest Service recognizes that inevitably some forest lands will be withdrawn from timber production to accommodate other users. These losses must be offset by increased production on the remaining areas.

#### **10.1.4 Statistics of forest industries**

This Section is concerned with the many industries engaged in the felling of timber and its transformation into a variety of products required in modern living. The extensive forests of Canada provide raw materials for several large and growing primary industries: sawmills and planing mills, shingle mills, veneer and plywood mills, particleboard plants and pulp and paper mills, which in their turn provide raw materials for a wide range of secondary industries that convert the products of the primary industries into more highly manufactured goods such as sash, doors, millwork, wooden boxes, furniture, converted papers and paper goods. However, much of the output of the primary forest industries is exported; the sawmill industry and the