

identification of species and sub-types and the classification of forest sites by the use of air photographs. Construction of suitable photogrammetric and other scientific apparatus include the forestry tri-camera method of air photography, which has been developed to provide maximum forestry information at minimum cost, and the shadow height calculator, constructed to facilitate the determination of tree heights from shadows in air photographs.

The Forest Economics Section carries out research on problems concerning the development of Canada's forests and their relation to the forest economy of the North American continent; studies the economic implications of forestry legislation; compiles periodically basic data on Canadian forest resources; and analyses statistics relating to production, consumption and trade in forest products. It also prepares economic and statistical reports to international organizations, such as the Food and Agriculture Organization (FAO), and the British Commonwealth Forestry Conferences.

Forest Products Research

Two Forest Products Laboratories conduct forest products research, one at Ottawa, Ont., and the other at Vancouver, B.C. The purpose of this research is to supply the basic and practical knowledge required for the best possible utilization of Canada's forest resources and includes studies of the factors affecting the quality of wood and of manufactured wood products; the factors causing wood waste in logging and manufacturing; the mechanical, physical and chemical properties of wood and their relation to adaptability in use; the treatment of wood and its use in the manufacture of fibre products, alcohol, turpentine, etc.; new and more valuable uses for woods; and the application of laboratory findings to the standardization of lumber grades and the improvement of timber specifications in the building codes of Canadian cities. The Forest Products Laboratories co-operate with similar organizations in other countries, with the provinces and with industry.

The Pulp and Paper Research Institute of Canada at Montreal, Que., a corporation supported by the Federal Government, the Canadian Pulp and Paper Association and McGill University, carries out research in the field of pulps and papers. The program of work includes studies of the structure and properties of wood and bark and their chemical components; the improvement of pulping processes; studies for the improved utilization of waste products; and the improvement in the design of industrial equipment.

Department of Agriculture

Investigation of outbreaks of injurious forest insects and of tree diseases are carried on by the Forest Biology Division, Science Service, Federal Department of Agriculture, because these lines of work are closely allied with the larger fields of general entomology and plant pathology. This work is done in close co-operation with the federal and provincial forest services. The Department also maintains two tree-planting stations at Indian Head and Sutherland, Sask., which provide farmers in the three Prairie Provinces with planting stock for the establishment of windbreaks and shelter-belts.