

including the fields of consumption, distribution and processing of the products of the forest. In addition, it provides the information that must be considered to determine the best means of using the forest resources in conjunction with other resources in order to maximize the total net returns to be obtained from the economy. Emphasis is being placed on the economics of production and a greatly expanded program in market research is being developed.

The Economics Division is to be reorganized into five sections: statistical and administrative, forest resources and policy, economics of production, marketing and international forestry. Regional economists will be stationed in selected field offices throughout the country.

The *Forest Products Research Branch* undertakes research embracing every aspect of forest products except that relating to the paper field. This research is directed toward obtaining the necessary background information and data on the properties of Canadian woods, developing new and better uses for wood products, improving manufacturing processes, and effecting more complete utilization of wood substances available from the forest.

Two laboratories, one located at Ottawa and the other at Vancouver, undertake the research program of the Branch. Several phases of research are concentrated at the larger Ottawa Laboratory while the work at the Vancouver Laboratory is concerned mainly with British Columbia and Alberta species. Close relationship with the forest products industries and the users of timber is maintained to ensure that the research work of the Branch is of optimum national benefit. In this connection, assistance is received from an Advisory Committee comprising members representing various timber manufacturers and wood-using groups, which meets periodically to discuss the research requirements of industry.

Research units of the Laboratories consist of: timber engineering, containers, glues and gluing, veneer and plywood timber physics, wood chemistry, wood preservation, paints and coatings, wood pathology, wood anatomy, logging and manufacture, and seasoning. Research activities include the determination of the physical, mechanical and chemical properties of wood and their relation to adaptability in use; studies of the factors affecting the quality of wood and of manufactured wood products; determination of the factors that cause wood waste in logging and manufacturing; research and investigation into the preservative treatment and painting of wood and the use of wood for the manufacture of cellulose, wallboards, alcohols, organic acids, and extractives; studies to determine possible new economic and more valuable uses for woods; and research aimed at determining methods and means for the practical and economical utilization of all wood substances available from the annual timber harvest.

There is constant co-operation with various government units in the performance of many special research investigations concerned with the use of wood. Research into the use of wood in housing construction and as an engineered material continues as an important activity that is undertaken in co-operation with the Division of Building Research of the National Research Council and the Central Mortgage and Housing Corporation. Of special interest was the compilation and publication of the Forest Products Research Branch Technical Note No. 30, presenting span tables for wood joists and rafters for housing, based on the use of grade-marked lumber. These have been incorporated in the recently published *Housing Standards, Canada, 1962*.

Additional work includes the application of laboratory findings to the standardization of lumber grades, development and improvement of engineering designs in wood, and the development of timber specifications for the building codes of Canada. Branch personnel serve on such international committees as those of the American Wood Preservers' Association, American Society for Testing Materials, and the Food and Agriculture Organization of the United Nations. Continuous collaboration is maintained with forest products research laboratories in other countries for the dual purpose of exchanging information and avoiding unnecessary duplication of research.