

Thus the unique problems of the country, particularly its large area coupled with a small population, have led to a typically Canadian organization of research, of which a very strong associate committee system is perhaps the most distinctive feature.

### Subsection 1.—Federal Organizations

Although research by industrial firms has been slow to develop in Canada, government research has expanded rapidly, at first because of the need for speeding up the production of raw materials, which were for many years the basis of Canada's export trade, and secondly because of the more recent interest in the processing of these raw materials and the necessity of meeting the needs of national defence. Federal agencies involved in research include the Departments of Agriculture, Forestry, Fisheries, Mines and Technical Surveys, National Defence, National Health and Welfare, and Northern Affairs and National Resources as well as the National Research Council and other Crown corporations such as Atomic Energy of Canada Limited. A system of committees, with nation-wide representation, eliminates unnecessary duplication of work from these national research organizations.

The scientific work of the Department of Agriculture is described in Chapter IX of this volume, the specialized work in scientific forest research in Chapter X, scientific services concerned with Canada's mineral resources conducted by the Department of Mines and Technical Surveys in Chapter XI, investigational work of the Department of Fisheries in Chapter XIII, research of the Canadian Wildlife Service of the Department of Northern Affairs and National Resources in Chapter I, the work of the Defence Research Board in Chapter XXV, the work of the National Research Council at pp. 326-333 and atomic research at pp. 333-338. The activities of the other federal agencies engaged in research are described briefly in the following paragraphs.

**Department of National Health and Welfare.\***—The federal Department of National Health and Welfare supports intramural and extramural research programs which aim to preserve and improve the health of Canadians. Within the Department, research is done in the laboratories or clinic services of the Health Services Branch (particularly its Laboratory of Hygiene and Divisions of Occupational Health, Radiation Protection, Nutrition, and Epidemiology), of the Food and Drug Directorate, and of the Indian and Northern Health Services Directorate. In the Administration Branch, the Research and Statistics Division carries out special studies, including surveys, in social and medical economics. The extramural program consists of grants in aid of medical research sponsored by the provinces and conducted in universities, hospitals and other institutions from funds provided under the National Health Grant Program. The Public Health Research Grant makes available about \$1,700,000 annually to assist in stimulating and developing public health research; in addition, other grants in the areas of Mental Health, Child and Maternal Health, Cancer Control, General Public Health, Tuberculosis Control, as well as Medical Rehabilitation and Crippled Children amount to an approximate \$2,000,000. To co-ordinate and advance the extramural program, senior officials of the Department confer with advisory bodies such as its Research Advisory Committee, representatives from the provinces, from other federal agencies (the Medical Research Council, the Defence Research Board and the Department of Veterans Affairs) and from voluntary groups such as the National Cancer Institute.

**Grain Research Laboratory.**—Rapid development of grain production in Western Canada led to the passing, in 1912, of the Canada Grain Act. This Act is administered by the Board of Grain Commissioners, which reports to Parliament through the Minister

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