

little R&D relative to its needs and yet pays a much higher proportion of these costs than does industry in many other industrialized nations. Government expenditures on in-house research seem disproportionately large compared with the current levels of industrial research.

One of the first tasks facing the new Ministry was to take an overview of Canada's national resources in science and technology. During the first year, the survey of funds and manpower assigned by the federal government to scientific activities was extended to the social sciences and humanities. The results of these surveys are published in the annual "Green Book" under the title: *Scientific activities: federal government costs and expenditures*.

The Ministry of State for Science and Technology is also studying reporting mechanisms for research in progress in industry and universities and, as part of a national audit of research resources, is engaged in a survey of highly qualified manpower so as to promote a more comprehensive information base for improved policies and programs concerning this segment of the Canadian labour force. Productive consultations in these matters have been established between the Ministry, private industry, the universities and other levels of government.

9.2 Federal scientific research agencies

Research activities in the various federal government departments and agencies have expanded rapidly, at first because of the need for speeding up the production of raw materials, which were long the basis of Canada's export trade, and later because of increasing interest in the processing of raw materials, the necessity of meeting the needs of national defence and the developing consideration for many human and resource requirements. Expenditures of federal government agencies engaged in research activities are given in Table 9.6. Research activities of the Canada Department of Agriculture and the Canada Grains Commission are outlined in Chapter 11. Some of the activities carried on by the Department of National Health and Welfare and by the Medical Research Council are described briefly in Chapter 6.

9.2.1 The National Research Council

An outline of the historical development of the National Research Council of Canada appears in the *1969 Canada Year Book*, pp. 388-389. Most of NRC's nine divisions are located on a 400-acre site just east of Ottawa. A Prairie Regional Laboratory is located on the campus of the University of Saskatchewan in Saskatoon and an Atlantic Regional Laboratory on the campus of Dalhousie University in Halifax. Of the Council's 1971-72 appropriation of \$140.4 million, about \$67.5 million was used for scholarships and grants, \$48.7 million for the operation of the laboratories and \$8.4 million for the Industrial Research Assistance Program. In 1972 it had a staff of some 3,000 including about 750 holders of doctorate degrees. About 40 associate committees were active. In the year ended March 31, 1972, it supported some 4,600 university scientists and awarded 2,600 scholarships, bursaries and post-doctorate fellowships.

9.2.1.1 Organization

The National Research Council Act assigns to the Council the responsibility of undertaking, assisting or promoting scientific and industrial research in the following general areas: utilization of Canada's natural resources; improving technical methods and processes now used in Canadian industry and discovering new ones to provide for expansion or development of new industries; maintenance and improvement of the primary physical standards of measurement for Canada; determination of quality standards of material to be used in public works and standardization and certification of scientific and technical apparatus used in Canadian industry and government; and the fostering and carrying out of scientific and industrial research through operation of research laboratories, financial assistance for research activities in Canadian universities, financial assistance and promotion of research in industry, and operation of the National Science Library and the Technical Information Services.

The Council consists of four permanent officers, the President, Vice-President (Administration), and two Vice-Presidents (Scientific) and not more than 17 other members appointed by the Governor in Council. The Council, a body corporate required to meet at least three times a year, is responsible to a designated Minister of the Crown, who is a member of the Committee of the Privy Council on Scientific and Industrial Research. Except for the four permanent officers, Council members are appointed for a term of three years and serve without salary. They are drawn from the senior staffs of universities, industry and labour, in order to provide advice based on both scientific discipline and regional representation.