

CHAPTER VIII.—SCIENTIFIC AND INDUSTRIAL RESEARCH

CONSPECTUS

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The interpretation of the symbols used in the tables throughout the Year Book will be found on p. xvi of this volume.

The characteristic problems of this country, particularly its large area, its small population and its unique industrial structure, have led to a typically Canadian organization of research. Early research was, of course, related to the primary industries. Geological mapping and agricultural research were almost the only areas of activity until the beginning of the present century. In 1898 research in the field of fisheries was assigned to an independent honorary board which has continued to the present as the Fisheries Research Board. In 1916 the Federal Government set up the National Research Council; its early duties were to encourage and stimulate research in the universities through grants and scholarships and it entered active research only with the establishment of its own laboratory system in the late 1920s and early 1930s. Great expansion in scientific research took place during the War when the National Research Council assumed the responsibility for research for the three Armed Services including the development of atomic energy. At the end of the War, the Council returned to its previous activities—the promotion of research in the universities and research for secondary industry. In 1947, the Defence Research Board was set up in the Department of National Defence with responsibility for military research (see Chapter XXVI). In 1952, the Crown corporation, Atomic Energy of Canada Limited, was established to proceed with the development of atomic energy in Canada, and certain other Crown corporations, such as Eldorado Mining and Refining Limited, Polymer Corporation Limited and Canada's largest national utility, the Canadian National Railways, developed important research programs.

Until the 1960s, industrial research was slow to develop in Canada, although certain large industries, particularly the chemical industry and the pulp and paper industry, had long histories of successful research effort. Research councils or foundations were set up by several provinces to improve industrial production efficiency (see pp. 422-424); of these, the Ontario Research Foundation and the British Columbia Research Council, although established under provincial legislation, are self-governing institutions engaged in research and development on contract for manufacturers, departments of government and on their own account, and derive their current revenue mainly from sponsored research. The Pulp and Paper Research Institute of Canada (see Forestry Chapter) is the one major research association that operates on a co-operative basis; its operating funds are provided by industry and its facilities by the Federal Government and McGill University, all three