

those of National Defence, Munitions and Supply, and Reconstruction. The third and most important function is in connection with the organizing and co-ordinating of national co-operative research programs in which various Departments and organizations have an active interest. This third function is performed generally through "Associate Research Committees", a distinctly Canadian mechanism of proven effectiveness. These committees are set up and convened by the National Research Council but they operate, not as committees of one Department or organization, but as associations of the leading experts in their particular research fields. The committees receive financial grants, lay out programs, and allocate problems to various laboratories. In addition to the many subjects under investigation in the National Research Laboratories, the Council is supporting 162 projects in the laboratories of 29 other institutions across Canada.

When the National Research Council was set up in 1916 its primary object was to foster, stimulate and co-ordinate scientific and industrial research in Canada. One of the first steps taken was to provide scholarships for research workers in an effort to build up a body of scientifically trained young men in Canada who would remain in this country and devote themselves to science and research. Since that time, approximately 1,200 awards, at an over-all cost of about \$830,000 have been made to about 700 different individuals. This activity has proved to be one of the greatest significance to science in Canada. Of the 700 individual grantees about 63 p.c. have proceeded to their doctorate degrees and, as is natural in a movement of this kind, an even greater number of students who were not holders of Council scholarships, proceeded to graduate work. The stimulation and assistance given by the National Research Council in this regard has had a most far-reaching effect in building up strong, scientific, graduate schools in Canada.

In addition to scholarships, the Council instituted a system of grants in aid of research to university professors and this again has been a most significant and constructive measure. Many departments and units in the various Canadian universities, particularly in the smaller institutions, have become active and permanent centres of research as the result of these grants.

Since 1939, the actual physical facilities of the Council have been extended greatly. The staffs of the laboratories have increased fourfold; the direct peacetime budget of under \$1,000,000 has grown to nearly \$6,000,000 and, in addition, the Council controls, indirectly, further expenditures of the same order of magnitude; the Associate Committee structure has been extended and strengthened; and the general advisory and liaison functions of the Council have really come into being in substantial form. For instance, the National Research Council has become the official research establishment of the three Service Departments of Defence, and the President and other officers of the Council sit on innumerable committees and have important contacts with all the war Departments in an advisory capacity. The President of the National Research Council is a member of such Service organizations as the Army Technical Development Board, the Wartime Technical and Scientific Development Committee, the Test and Development Establishment, the Canadian Inventions Board and many other Government organizations and secret committees directly concerned with the conduct of the War.

Activities within the National Research Laboratories at Ottawa include the work of the aeronautical and hydraulic laboratories of the Division of Mechanical Engineering; investigations in foods and industrial utilization of agricultural products in the Division of Applied Biology; test and specification work and fundamental