

### NATIONAL RESEARCH COUNCIL

During the fiscal year 1957-58, the National Research Council:

- provided \$3.6 million to support pure research in the universities (510 grants; 305 scholarships and fellowships);
- employed 583 scientific research staff (including 142 postdoctorate fellows), 854 technical personnel, and 888 general service and administrative staff;
- operated five laboratory Divisions in the sciences: Applied Biology, Applied Chemistry, Pure Chemistry, Applied Physics, and Pure Physics;
- operated three engineering Divisions: Building Research, Mechanical Engineering, and Radio and Electrical Engineering;
- operated two regional laboratories, one at Halifax and the other in Saskatoon;
- operated a Division of Medical Research to award grants and fellowships in support of research in this field;
- sponsored 30 Associate Committees, operating in such diverse fields of science as Aquatic Biology, Corrosion Research, Plant Breeding, Radio Science, and Soil and Snow Mechanics;
- answered 9,500 technical enquiries from Canadian industries.

This information was contained in the forty-first annual report of the National Research Council of Canada, 1957-1958. Excerpts from the Report of the President, Dr. E.W.R. Steacie, follow:

"During the past year the West has been forced into a new look at science and this has resulted in some speeding up of research efforts in most countries, Canada among them. Canada has an additional reason for such an acceleration since we are rapidly undergoing an industrial expansion and it is, therefore, necessary for us both to keep up and to catch up in industrial research. The speed with which we become industrialized will undoubtedly be related to the research done inside our borders. It has become a cliché that the fundamental research of today becomes the manufactures of tomorrow. Close and careful attention must, therefore, be given to the expansion of scientific research in our universities, our Government laboratories, and our industries.

"Because of contacts through the scientific literature and of other kinds, research workers in the West have been aware for many years that scientific research in the Soviet Union is sound and productive. It has repeatedly been stated that Soviet scientists were certain to make considerable advances in those fields in which they were prepared to make a special effort, and yet a year ago the general public firmly believed that the Western position in science was "unassailable" and that there was no possibility that the Soviet Union could challenge western "supremacy". This complacency was shattered by the launching of the first earth satellite which showed in a

dramatic way that Soviet science and technology are indeed extensive and efficient.

"The launching of the first satellite did, in fact, indicate a change in the U.S.S.R. although neither so dramatic nor so ominous as interpreted by the public. It did not mean that the U.S.S.R. had become a great scientific nation overnight. On the contrary it showed that the system of education and the programme of scientific research pursued systematically over thirty years had been thoroughly successful and in consequence the U.S.S.R. must in the future be accepted as an advanced nation.

"Science, among other things, is the basis of military power and the foundation of industrial strength. It is this realization which to some extent accounted for the reaction to Sputnik. Those who had previously refused to believe the U.S.S.R. capable of any scientific research not directly copied from the West frequently swung to the other extreme and proclaimed that the West was lagging badly in all fields of science. This is, of course, a complete misconception. What is implied by events is that Soviet scientists have now reached parity with the most advanced Western nations in science. It is nevertheless most unfortunate to regard science as a race with Russia. Our scientific effort should be aimed at our own means and desires rather than interpreted on the basis of per capita competition with another nation. There is no question, however, that entirely apart from any consideration of what Russia may or may not be doing, Canada's own immediate requirements in her expanding universities and her expanding economy demand a considerable increase in Canadian scientific effort. The national scientific effort consists of three parts--the universities, the Government laboratories and the industrial research laboratories.

#### RESEARCH IN THE UNIVERSITIES

"The Council has instructed me to urge the Government to increase its support for scientific research in universities. During the fiscal year 1957-58, the National Research Council provided over 3½ million dollars to Canadian universities to support scientific research and to assist post-graduate science students. During the next fiscal year the Council has recommended that the programme for university support should be increased to six million dollars, and this figure has been tabled in the estimates. Beyond that, if scientific research is to keep pace with the expected expansion of the universities and of industry, continually and rapidly increasing financial support will be necessary from the Federal Government, the Provincial Governments, and from private agencies.

#### GOVERNMENT LABORATORIES

"Much also remains to be done in the other areas of scientific effort, the laboratories