

Applied research in Canada has for a long time played a great role in some of our primary industries - agriculture, forestry and mining. The development of new strains of rust-resistant wheat by our Experimental Farm Service is perhaps one outstanding example. For this development has greatly reduced the hazards of farming and has facilitated the general application of mass production methods to agriculture. It is only in more recent years - not much more than the last three decades - that basic and applied research as it affects the development of our secondary industries has begun to assume importance.

#### Complaints about Canadian Dependence on Foreign Research

Canadians, even though they may not talk much about it, have become understandably proud of their industrial achievements. They have grown more conscious of the responsibilities which go with being one of the world's leading industrial nations.

But I find in some places a feeling of diffidence when it comes to comparing Canadian achievements in the field of industrial research with those of others. It is not that the Canadian scientist is any less capable than his colleague in the United Kingdom or the United States. Nor is it the absence of specific dramatic achievements. But most people that I discuss industrial research with talk about how relatively little we are doing and how much we continue to depend on other countries for research and technical development. They are confirmed in this attitude by visiting industrialists and scientists from abroad who point to the many branch plants of foreign companies in Canada which for their development depend a great deal on the research and experimental work done by their parent companies. Only a few weeks ago an outstanding British scientist, in commenting on Canada's great dependence on foreign industrial research, is reported to have said that this meant in effect that a great deal of the brain work, the creation of new ideas and techniques, was being carried out elsewhere while only the "donkey work" was being done in Canada.

Now I agree, we all want to see more industrial research done in Canada. We also are very much interested in making sure that the most effective use is made of whatever scientific genius may create. But I wonder a little about two things.

First, is there really any need for Canadians to feel inferior to any other country when it comes to comparing research achievements, bearing in mind the varying state of development and the different kind of problems we are facing? Secondly, if Canadian scientists are making good progress - I shall make this point shortly - and we are sharing these results with other countries should we really feel that it is not good for "the spirit and intellect" of Canada to benefit from research and development work done outside our borders?

#### Progress of Canadian Industrial Research

I hope you will bear with me if for the next few minutes I draw for you a sketch of some of the major achievements in the industrial research field made in Canada in recent years. In considering these achievements, let us bear in mind that Canada is a country with a population one-quarter that of the United Kingdom and less than one-tenth that of the United States. Against two centuries of United Kingdom industrial history and one century of phenomenal economic growth in the United States, Canada's industrial development is of comparatively recent vintage.