In 1963 the company established a research laboratory at Port Moody, B.C. Since receiving its first IRAP grant in 1964, the company has expanded its research efforts sixfold. The main activities of the Port Moody laboratory are directed towards developing new products for the forest products industry – adhesives, overlays, and coatings for plywood, wood and particleboard. A laboratory, opened in Toronto in 1966, and expanded 10-fold in 1968, serves a research group carrying out work in fundamental and analytical chemistry.

Some large companies have used IRAP grants to get into more sophisticated research and into fields of potential interest outside of their current activities. Uniroyal Ltd. of Canada is perhaps the best example of a company meeting IRAP's original concept. Since 1962 when Uniroyal received the first in a series of IRAP grants, its buildup has been the most spectacular of all assisted companies. It has had a five-fold increase in staff to the present 100, one third of whom possess doctoral degrees. The supported research at its Guelph, Ont., laboratories has been directed towards the discovery of new chemicals for use in the rubber and plastics industry and in agriculture.

An outstanding result of their work has been the discovery of a group of systemic organic fungicides of great potential importance to agriculture in the control of smuts and rust. It is particularly effective against loose smut in barley and wheat where, previously, chemical control was not possible and losses ran as high as 25 per cent of the crop. Experimental quantities measured in tons have been used successfully in many countries of the world and it is anticipated commercial quantities will be sold in Europe this year, and in North America as soon as clearance of the U.S. Food and Drug Administration has been obtained.

On a more altruistic level, IRAP grants of some $50,000 have been used to help fund the Northern Electric Company's development of hydraulically-operated artificial arms. The arms, the first complete hydraulic prosthesis to be worn by a patient, are the latest product of a co-operative agreement between government, industry and medical agencies to provide the most advanced prosthesis devices for youngsters in Canada, primarily those deformed by the drug thalidomide.

Fifteen-year-old high school student Clare Scullion demonstrates her skill in using her hydraulic arms.

Prenant des notes grâce aux bras à commande hydraulique, Clare Scullion, âgée de 15 ans, suit ses cours au lycée.

All movements of the first hydraulic arms were controlled by a lever near the shoulder.

Au début, la commande des bras s'effectuait au moyen d'un levier disposé sur l'épaule de l'handicapé.

The arms operate on established hydraulic principles to perform various arm and hand movements. Control of the arms is by electrical and/or mechanical devices suitably located on the patient's body. A battery supplies power to operate a miniature high-speed electric motor/hydraulic pump combination which sends fluid through flexible plastic tubing under high pressure to the various hydraulic actuators. The arms are light and every attempt has been made to give them a like-life appearance. Modular design aids in fitting the prosthesis to patients of varying physical size or degrees of amputation. Obvious advantages of hydraulically-operated artificial arms over previous mechanical and electrical-mechanical models are their superior strength, ease of control, smoothness of operation, low noise level, reliability and resistance to damage by dirt particles.

One measure of the effectiveness of IRAP can be gauged by the projected time of completion of projects being submitted, according to G. W. Donaldson, Assistant Secretary of the IRAP committee. "During the early years, companies made requests for support of projects expected to last an average of just three years – hardly enough time to launch any major undertaking. Now, most of the proposals received request support for the present maximum of five years, and some will require many more years of funding by the company to reach fruition. This is a significant shift and we like to think our program is encouraging industrial companies to plan farther into the future," he says.