

representing divisions of animals, crops, soils, entomology and plant pathology, and forest biology assist the programming of the work. Three research services—Statistics, Engineering, and Analytical Chemistry, located with the Administrative and Executive group at Ottawa—provide research groups across the country with specialized leadership and service and undertake critical researches or other creative work as required.

*The Institutes.*—The Institutes are organized on a scientific rather than a problem basis and are engaged primarily on basic research of wide application to agriculture and forest biology. They also carry out related national work such as the identification of plants, insects and pathogens. There are seven Institutes at Ottawa and one each at London, Belleville and Sault Ste. Marie, all in Ontario.

The Animal Research Institute covers the fields of genetics and breeding, nutrition, physiology, biochemistry, and management, and tackles problems in the production of milk, beef, lamb, pork, poultry, eggs and fur.

Plant studies are carried out at the Plant Research and the Genetics and Plant Breeding Research Institutes in taxonomy, physiology, biochemistry, pathology, agrometeorology, weeds, and fruit and vegetable processing and storage. Cytological and genetic studies on cereal, forage, tobacco and horticultural plants are made by the Genetics and Plant Breeding Research Institute with special reference to problems encountered in the breeding programs and the assessment of quality characteristics.

The staff of the Soils Research Institute is engaged in studying genesis and classification, fertility, mineralogy and the organic, physiochemical and physical aspects of soils. This Institute gives leadership to the federal-provincial soil survey program through classification studies and by developing and standardizing analytical methods. It also provides a national soil mapping service.

A major section of the Entomological Research Institute deals with taxonomy, other assignments being in the fields of genetics, physiology, nematology and apiculture. The Institute assembles and maintains the national collection of insects.

The Microbiological Research Institute is mainly concerned with metabolism, nutrition and genetics of bacteria of agricultural significance.

The Dairy Technology Research Institute investigates problems in sanitary milk production and the processing of dairy products and undertakes projects to improve existing dairy products and to develop new ones.

The Pesticide Research Institute at London, Ont., examines chemicals used or intended to be used for insect, disease or weed control and investigates the reason for and the nature of the biological activity of the chemical.

The Biological Control Research Institute at Belleville, Ont., is concerned with efforts to control destructive insect pests and noxious weeds with parasitic and predaceous insects, and with insect disease organisms. It is also the principal importing centre for beneficial insects and for some disease organisms from foreign countries.

The Insect Pathology Research Institute at Sault Ste. Marie, Ont., is the major importing centre for disease organisms. Insect diseases, including viruses, fungi, bacteria and protozoa are studied.

The Regional Institutes, Stations and Services cope with primary problems in various regions in all provinces. Nine major laboratories are working on forest and shade trees, and on forest products diseases and pests in conjunction with provincial forest services and the forest industries

Other units have undertaken projects assisting in the exploitation of peat bogs, reclamation of marsh land for pasture, propagation of shelterbelt trees and prevention of soil erosion, dryland agriculture, the growing of special crops such as tobacco, and live-stock breeding.

The Research Laboratory at Winnipeg, Man., has a world-wide reputation for its contribution in the field of cereal rusts and is the national centre for investigations concerning insects in stored products.