

coming increasingly valuable as a reference collection not only for the use of the Department, but also for students and colleges. For reference purposes an extensive collection of seeds has been accumulated, and constitutes one of the most valuable in the Dominion. It comprises representative collections of seeds of plants occurring all over the globe.

The plant pathology section is devoted to research on diseases caused by fungi and bacteria occurring on each and every kind of plant, whether constituting our natural resources, including forestry, or grown for special purposes. Without a recognition of the most up-to-date and modern means used in plant pathology, immense national losses would result. Many instances might be quoted to indicate that modern methods of control and prevention have been responsible for a substantial reduction in the cost of production of all kinds of crop plants.

At Ottawa the Central Plant Pathological Laboratory serves as headquarters for the Dominion. At the same time, besides undertaking special phases of mycological research, the Central Laboratory directs the policy of a series (10) of branch laboratories extending from coast to coast and dealing with the important phases of work of local interest and importance. Among these laboratories, the Dominion Grain Rust Research Laboratory at Winnipeg may be specially mentioned, as an example of a centre of close co-operation between Dominion and Provincial agencies in the study and prevention of losses from grain rust. Three of the branch laboratories deal with the fruit industry, *viz.*: Kentville, N.S., St. Catharines, Ont. and Summerland, B.C. Field crop and potato diseases are dealt with mainly at Charlottetown, P.E.I. and Fredericton, N.B., while Edmonton, Saskatoon, and the Winnipeg laboratory already referred to, are concerned with the diseases of grain most important economically, *viz.*, smuts, rusts, foot and root rots, etc. Saanichton, B.C., serves the interests of Vancouver island and the Fraser valley.

The Central Laboratory directs a Dominion-wide plant disease survey, keeping a close watch on the progress of diseases and enabling steps to be taken without delay to prevent the unsuspected establishment of the insidious enemies of agriculture throughout the Dominion.

The seed potato certification service is also directed from these headquarters and its aggressive policy has secured most valuable export markets for the Dominion.

The National Mycological Herbarium and a unique collection of forest pathological and wood-destroying fungi, both of specimens and living cultures may be mentioned as outstanding among reference collections.

In addition to these more or less specialized research phases of work, the importation of plants and plant products is closely supervised to prevent entry of destructive plant diseases. Thus there exists a plant pathological service devoted to the maintenance of health and quality of every agricultural commodity produced in Canada.

*Cereals.*—The chief functions of the Cereal Division may be enumerated as follows: (1) the production of superior varieties of cereal and leguminous grains by a process of breeding and selection; (2) the importation and testing of promising varieties from other countries; (3) the production of *élite* stock seed of registerable varieties of grain for propagation by members of the Canadian Seed Growers' Association; (4) the evaluation of various crop combinations which may prove especially desirable for specific purposes; (5) the systematic descrip-