

pursued throughout the system is settled by agreement after discussion by the Director, the technical officers, and the superintendents on whose branch farms the work is to be conducted. The technical staff at Ottawa supervises the actual experimental work at the Central Farm. At the branches, the superintendents are in charge of the carrying out of the various lines of general experiment, and also conduct experiments of local importance.

The Divisions at Ottawa, which represent the different lines of work carried on throughout the system, and have each a technical officer in charge, are as follows:—(1) Animal Husbandry; (2) Bacteriology; (3) Bees; (4) Botany; (5) Cereals; (6) Chemistry; (7) Extension and Publicity; (8) Economic Fibre Production; (9) Field Husbandry; (10) Forage Plants; (11) Horticulture; (12) Illustration Stations; (13) Poultry and (14) Tobacco. Briefly the main lines of the work of these Divisions are as follows:—

*Animal Husbandry.*—This Division engages in work with beef cattle, dairy cattle and dairying, horses, sheep and swine, and undertakes experiments in the breeding, feeding, housing and management of each of these classes of live stock. Under this Division also is operated the work in breeding cattle and hybrid buffalo at Wainwright, Alberta.

*Bacteriology.*—The work of this Division is of two types, routine and research. The former includes the bacteriological analysis of water, milk, foods and feeding stuffs, soils and soil condiments, and the manufacture and furnishing of nitro-cultures for legume growing. The main work is of an investigational nature, in which close co-operation with the other Divisions is maintained in research work having a bacteriological bearing.

*Botany.*—The work of this Division falls into two classes, economic botany and plant pathology. The former includes the study of medicinal, poisonous and economic plants. Different varieties and strains of fibre plants are also studied and special attention is given to the life history and control of weeds. The Division also has charge of the arboretum at the Central Farm. In plant pathology, in addition to the pathological laboratory at Ottawa, there are laboratories at Charlottetown, P.E.I.; Kentville, N.S.; Fredericton, N.B.; Ste. Anne de la Pocatière, Que.; St. Catharines, Ont.; Summerland and Saanichton, B.C. In addition, three large laboratories for the study of rusts and other grain diseases are maintained at Edmonton, Alta., Saskatoon, Sask. and Winnipeg, Man. Investigations are being conducted into diseases affecting forest trees, fruit trees, cereals, small fruits, potatoes, vegetables and tobaccos.

*Cereals.*—In the Cereal Division, the work comprises the production, by cross-breeding and selection, of new varieties of grains and the testing of these as to their suitability for various parts of Canada. All approved varieties are made available for propagation by farmers. Among the more important varieties produced in this Division and now widely grown in Canada are Marquis and Huron wheats, Banner Ottawa 49 oats, and Arthur peas. Two interesting varieties originated by this Division are the Garnet and Reward wheats, now being tested by farmers; they ripen not quite as early as Prelude but yield better. The Division also carries on extensive milling and baking tests. The expansion of breeding work especially for disease resistance, and the creation of an extensive plan of co-operative experiments with farmers, are two developments of recent years.