

(d) The analysis of and experimentation with fertilizers of various types in order to test their value for different crops.

(e) Factors entering into the composition and digestibility of foods for different classes of stock.

(f) Investigation with regard to the planting of trees for both timber and shelter purposes.

(g) Research work on the plant diseases and insect pests which ravage cultivated plants and trees, and the determination of the best preventatives for use in controlling same.

It may be readily seen from the above that the Experimental Farms are planned: (1) to cover in a thorough manner the most important operations of the modern farm, and (2) to offer a means of improvement in both quality and extent of production of agricultural produce.

#### THE CENTRAL FARM, OTTAWA

This farm, in addition to conducting re-search work on an extensive scale, serves as headquarters for the entire system, and it is from here that the work of the branch farms is guided and supervised. Each branch of work receives the attention of a separate staff of men. A brief outline of the scope of each division will follow.

#### AGRICULTURIST'S DIVISION

This department includes Field Husbandry, Live Stock and Dairy Husbandry. Its chief object is to obtain by experimentation from year to year, information regarding the seeding, cultivating and harvesting of farm crops; the breeding, feeding, and housing of live stock; and the manufacture and care of dairy products.

The live stock consists of four classes of animals, viz., horses, cattle, sheep and swine. The horses are kept essentially for work, and breeding has not as yet been carried on, experiments being

confined to the problems of feeding, housing and ventilating. The cattle barns contain animals which are typical of high-class dairy farms of Eastern Ontario and Quebec. Such breeds as the Holstein-Friesian, Ayrshire, Guernsey, Jersey and French Canadians are being constantly tested for milk and butter production.

The testing of various feeds and the problems of breeding and selection have constituted no small part of the Dairy work carried on in the division.

In addition to the above, extensive experiments are being conducted with beef cattle, sheep and swine. Yorkshires, Berkshires and Tamworths represent the breeds of swine kept; and Leicesters and Shropshires, the sheep. Investigations with beef cattle have, for the most part, taken the form of steer-feeding experiments.

In connection with dairy work, a small plant is maintained where the necessary appliances are installed for a herd of sixty or seventy cows, and where the butter and cheese are manufactured on the farm. In this department experiments in butter and cheese-making are conducted.

The Field Husbandry investigations deal mainly with the question of crop rotation. On the Central Experimental Farm thirteen different rotations are under test. This makes it possible to obtain definite results as to their relative values as (1) soil improvers, (2) suitability for different methods of farming. These results serve as a basis for the management of general farm crops.

#### THE HORTICULTURAL DIVISION

The area of land set aside for the use of this department approximates ninety-nine acres. Fruits and vegetables occupy about forty-six acres, one-half of which is devoted to apple-growing, the other half to various small fruits. The