

on at all the farms, but the larger part is sent out from the Central Farm. In 1895, 30,553 samples were mailed to 28,282 applicants, and during the past five years more than 100,000 of such samples have been sent out for test to about 70,000 applicants. In many districts the new varieties which have thus been introduced are finding much favour, and are rapidly replacing in general cultivation the less productive sorts formerly grown. The surplus stock of promising varieties of grain grown at all the experimental farms, beyond what is required for the free distribution of sample bags, is sold in larger quantities to farmers for seed.

574. The Agriculturist takes charge of the experiments with field crops, of cereals, roots, Indian corn, hay and other fodder crops; its testing of varieties as to their relative productiveness on different soils, also regarding the effects of the application of manures on field crops, and the ploughing under of clover and other green crops as fertilizers. Much experimental work has been carried on with ensilage, with the object of determining the relative feeding value of different fodder plants and combinations of fodder plants thus preserved, and their general usefulness as food for cattle. Experiments have also been conducted for several years to ascertain how many cows can be fed throughout the year from the crops raised on forty acres of land.

The Agriculturist also conducts the feeding experiments with cattle, the main object of which has been to show the most economical rations for the production of milk and beef. These tests have been made chiefly with various combinations of ensilage, roots, hay and straw with or without certain quantities of grain in the ration. The results have shown the great economy of using ensilage of Indian corn for the winter feeding of cattle. Many experiments have also been carried on in the fattening of swine, and much information has been gained as to the relative value of the different sorts of cereals for this purpose and the best methods of preparing them for feeding, also the usefulness of skim-milk, buckwheat, potatoes and roots as food for some. This officer also takes charge of the dairy department, and conducts the experiments in butter-making.

575. The work of the horticultural division, which is in charge of the Horticulturist, may be classified in the following manner:—

1. That carried on with plants growing on the Central Farm.
  - (a.) Testing varieties of fruits and vegetables.
  - (b.) Producing new varieties of fruits.
  - (c.) Cultural experiments with fruits and vegetables.

The above lines cover a wide field and embrace investigations conducted in the domain of original research, as well as those carried on by observing and recording results obtained by the effect and operation of natural laws, in connection with temperatures, soils and so forth.

2. That carried on with the assistance of interested fruit growers residing in different portions of the Dominion.
  - (a.) Treatment and prevention of fungous pests.
  - (b.) Effect of soil and climate upon fruit and fruit trees.
  - (c.) Adaptability of varieties to varying soils and climates.