

AGRICULTURE

value, and the straw has also been examined to determine its value as fodder. Analyses have been made of soils from different parts of the Dominion, more particularly from the large untilled virgin area of the Northwest. Investigations have been made into the production, fermentation and application of farmyard manures. Many experiments have been conducted to throw light on the factors affecting soil moisture, and means have been suggested whereby the desired conditions of moisture may, to a great extent, be obtained and controlled by cultural operations. The influence of environment on the composition of wheat has been studied since 1905, and the work has now been enlarged, through co-operation with the Dominion Meteorological Service at Toronto, to secure a more comprehensive and detailed study of the relationship between weather conditions and crop growth. Analyses of sugar beets have been useful in demonstrating the suitability of soil and climate at widely different points of the Dominion for the growth of roots of high sugar content and purity. Well waters from farm homesteads have been the subject of special study. Numerous analyses are made in conjunction with problems relating to the land, the crop and the animal which from time to time are submitted by farmers for solution. Analyses are also made of dye stuffs, preservatives, pickling solutions, etc., for the Meat Inspection Division of the Health of Animals Branch of the Department, with a view to the detection of injurious substances. Systematic investigational work with commercial fertilizers is now being carried on at the larger number of the branch Farms and Stations. Owing to the scarcity of potash caused by the European war, the preparation of a nitro-potassic fertilizer by the drying and grinding of seaweed was undertaken at a point on the coast of Nova Scotia. The fertilizing value of the material so prepared is being tested in the field.

The Poultry Division undertakes experiments in the breeding, mating, incubating, brooding, rearing, housing and feeding of farm poultry, in the production of eggs, the preparation of poultry produce for the market and the study of poultry diseases. Demonstrations in poultry keeping are made at Ottawa and at the branch Farms and Stations, these latter being chiefly for the purpose of proving locally that farm poultry rather than the poultry farm is profitable, and for the distribution of improved breeding stock to farmers.

Recent Developments.—Experiments in the growth of tobacco are carried on by an expert from France at Ottawa, assisted by local superintendents at the tobacco stations of St. Jacques l'Achigan, and Farnham, Quebec and Harrow, Ontario. These experiments include the testing of different varieties to suit the Canadian soil and climate, the best means of curing and the preparation of different kinds of tobacco for the market. In 1912 a Division of Forage Plants was established under the direction of a scientific officer from the Plant Breeding Station at Svalöf in Sweden. The Division has for its object improvement in the quality and yield of grasses, clovers, alfalfas and other forage crops grown in Canada. An Economic Fibre Division was established at Ottawa early in 1916 to investigate the possibilities of the flax fibre industry in Canada. A flax mill has been completed at