

## AGRICULTURE

hardy stocks. Variety tests in strawberries and various garden crops are being continued, and an experiment has been laid out to show the value of ploughing under clover sod both from the standpoint of increased crop production and the control of disease. The hill selection of potatoes is being combined with a variety investigation. In the chemical, entomological, and botanical laboratories experiments are being conducted, the more important of which relate to a soil survey of the province, a study of the life history of insects and fungi affecting apple trees and various cultivated plants.

## QUEBEC.

**Macdonald College, Ste. Anne de Bellevue.**—The College is situated about 20 miles west of Montreal and is incorporated with McGill University. The College property comprises 786 acres divided as follows: main farm, 584 acres; cereal husbandry plots, 75 acres; poultry department, 17 acres; orchards, 35 acres; vegetable gardens 25 acres; the campus, including driveways, lawns, trees, shrubs, flowerbeds, school garden and recreation fields for students of both sexes, 50 acres. The following is a brief indication of the more important experiments, as to which further information may be obtained from the College report of 1916-17

*Animal Husbandry.*—In the Animal Husbandry Department some results of special interest were obtained during 1916. Returns from the demonstration sheepflocks show an increased cost of maintenance, the average total cost per breeding ewe being \$3.97 per year. The commercial returns per ewe averaged \$10.70, the fleece value amounting to \$2.40 of this, and the net profit per ewe was \$6.73. The self-feeder for swine was introduced, and an experiment on the "Cafeteria" plan proved very suggestive for further work. The hogs fed with the self-feeder were allowed four kinds of meal: shorts, ground corn, tankage, ground oats and barley mixed. These were placed in separate compartments in the feeder, and water was supplied in the regular troughs. The pigs that had access to the feeder made an average daily gain of 1.2 lb., and for each pound of gain 4.66 lb. of meal were required. Those fed on the same feeds by hand three times a day averaged 1 lb. per day and required 4.99 lb. of meal per pound of gain. Other lots of hogs were allowed different amounts of exercise during development from weaning time. The hogs that were closely confined required more care to keep them clean, but led all others in rate and economy of gain, as the following results show:—

- Close confinement—1.1 lb. average daily gain, requiring 3.44 lb. of meal per pound gain.
- Limited exercise—0.95 lb. average daily gain, requiring 3.70 lb. of meal per pound gain.
- Large paddock—1.92 lb. average daily gain, requiring 3.96 lb. of meal per pound gain.

The dressing percentages of the different lots were in the reverse order, ranging from 74.4 for the large paddock lot to 71.7 for the close confinement lot.

*Cereal Husbandry.*—The improvement of farm crops by selection and breeding receives close attention. This work is carried on with