

It will be seen that for best results it is of great importance to sow spring wheat as early in the spring as the land is suitable for cultivation. According to the results of the experiment, a delay of one week made a decrease in the yield of 2.7 bushels per acre, or of fully 12 per cent.

By sowing at the right time, on well prepared land, the best seed obtainable of the Marquis wheat, the increase in production would be surprisingly great, and the available amount for export might be easily increased many fold.

FIELD BEANS.—According to the Bureau of Industries for Ontario for 1916, the market value per acre of some of the grain crops of Ontario are given as follows: Beans, \$58.95; Corn for Husking, \$36.57; Wheat, \$34.19; Peas, \$27.41; Spring Wheat, \$24.89; Barley, \$23.91; Rye, \$18.81; Oats, \$17.50; and Buckwheat, \$15.51. Beans occupy a high place in value per acre among the grain crops of Ontario.

Field beans approach animal foods in nutritive value. They contain a high percentage of protein and in this respect surpass the other grain crops frequently used as food. There is a higher percentage of protein in beans than in the best cuts of meat, but it is not quite so completely digested. Protein is a nutrient which serves to build and repair body tissues as well as to furnish energy. It performs essentially the same part in nutrition, whether it is from beans, peas, wheat, meat, milk or cheese.

The Province of Ontario, and the States of Michigan and of New York, have produced about one-half of the beans of the North American Continent within the last few years. In 1916, 83 per cent. of the acreage of beans in Canada was in Ontario. The number of acres of beans in this Province was 53,999 in 1916 and 114,785 in 1917. Beans are one of the most valuable crops which can be grown in Ontario for export. They can be transported readily, and, when well matured, can be stored without much danger of injury. It seems proper for Ontario to produce as large an acreage of beans in 1918 as the limited amount of labor will permit.

BEEF AND BACON—PROF. G. E. DAY.

In normal times it is counted good business to give our beef cattle a good degree of finish before sending them to market. The higher price obtained for well finished cattle has usually been profitable to the feeder.

At the present time, however, we are facing decidedly abnormal conditions. Statistics indicate that the world is facing a heavy shortage of wheat. If these statistics are correct, it looks as though it might be necessary to use grains heretofore employed almost exclusively for the feeding of animals, to help out the supply of wheat. As a matter of fact, investigations are in progress to determine the extent to which wheat flour may be adulterated with the flour of other cereals and still retain its palatability for human consumption.

If it becomes necessary, therefore, to utilize the coarser cereals for human food, it must mean a shortening up of concentrates for fattening animals, and the question arises whether, under present prospects, we should not make a special effort to use the smallest possible amount of concentrates, and utilize to the fullest extent bulky fodders in the fattening of our cattle.

Some years ago the Ontario Agricultural College secured a gain in weight of 2,180 lbs. in the case of fattening steers, from the use of 2,187 lbs. of ground barley and 729 lbs. of bran. This is very little more than one pound of concentrates used for each pound of gain in weight, the balance of the ration being made