

The Ontario Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep, and Swine Breeders' Associations, and of the Farmers' Institute System of the Province of Ontario.

THE DOMINION CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

Annual Membership Fees:—Cattle Breeders' \$1; Sheep Breeders' \$1; Swine Breeders' \$2.

BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs, during the year in which he is a member. In the case of the Swine Breeders' Association this includes a copy of the Swine Record.

A member of the Swine Breeders' Association is allowed to register pigs at 50c. per head; non-members are charged \$1.00 per head.

A member of the Sheep Breeders' Association is allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale, are published once a month. Over 20,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

A member of an Association will only be allowed to advertise stock corresponding to the Association to which he belongs; that is, to advertise cattle he must be a member of the Dominion Cattle Breeders' Association, to advertise sheep he must be a member of the Dominion Sheep Breeders' Association, and to advertise swine he must be a member of the Dominion Swine Breeders' Association.

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 9th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

F. W. HODSON, Secretary.
Parliament Buildings Toronto, Ont.

STOCK FOR THE WEST.

Another car-load of pure-bred stock will leave Ontario for Manitoba and the West this week. The car will start from London on Thursday morning, November 10. Stock will also be loaded at Streetsville on Tuesday evening and at North Toronto on Wednesday morning, November 9th.

A NOTE FROM THE BACTERIOLOGICAL DEPARTMENT, ONTARIO AGRICULTURAL COLLEGE.

It was thought advisable this year to remove the incubators and other apparatus used in connection with the manufacture of tuberculin, from the general Bacteriological Laboratory to a large room downstairs, so as to be at some distance from the students' work-room. The room in which the manufacture is carried on is connected with the main laboratory by a staircase. Several new pieces of apparatus have been added recently, and we have now facilities for making over 20,000 doses per year, should this amount be needed. Farmers who wish to have their well-water examined can send to the Bacteriologist for instructions, and may have the analysis done free of charge.

AN ABRIDGED REPORT OF AMERICAN EXPERIMENTS WHICH ARE OF VALUE TO CANADIAN FARMERS

RATIONS FOR DAIRY COWS. WIDE VERSUS NARROW RATIONS.

The Pennsylvania Station made inquiries among the dairymen in that state as to the rations they were feeding their cows. The replies show that only about twenty-five per cent. of the rations were compounded in a practical and scientific manner. The large

est ration reported contained four times the amount of food found in the smallest one. It seems impossible that of two cows of equal weight one could eat four times as much as the other. Making some allowance for difference in appetite it would seem that in one case the cows were over-fed and in the other case they were under-fed. Both conditions mean a loss to the owners.

As a rule the rations reported do not contain enough protein, i.e., nitrogenous substances. Bulletin No. 104 of the Ontario Agricultural College on "Rations for Dairy Cows" shows that Ontario dairymen are inclined to err in the same way. That is, they are not feeding enough of such foods as clover hay, peas, bran, linseed meal, cotton-seed meal, gluten meal, brewer's grains, and malt sprouts.

The amount of protein required to properly balance a ration has been determined by numerous experiments both in America and Europe. The proportion of protein to the other constituents of the food is called the "nutritive ratio." If the ration contains a large amount of protein it is called a "narrow ration," while if it contains a small amount of protein it is said to be a "wide ration."

The Pennsylvania Station tried the effect of wide and narrow rations with the station dairy herd. The cows used were nine Guernsey and Guernsey grades about sixty days from calving. The permanent portion of the ration was corn stover and chopped wheat. To this different amounts of gluten meal were added so as to make rations possessing nutritive ratios ranging from 1:3.9 to 1:6.7. The American standard for dairy cows calls for a nutritive ratio of 1:5. In the trial seven of the nine cows required less digestible food to make a pound of

butter when they were fed the rations rich in protein. After deducting the cost of the food the rations rich in protein gain a little larger net profit. With the richer rations the percentage of fat was better maintained in the milk and even slightly increased.

The Massachusetts Station has made two experiments to find out the effect of narrow and wide rations in the quantity and cost of milk and butter and the composition of milk. The basal rations fed the cows in the first experiment consisted of hay and sugar beets. In addition to the wheat bran and Chicago gluten meal were added in such quantities as to make the nutritive ratio 1:3.86. Another ration was made up with cornmeal instead of gluten meal, having a nutritive ratio of 1:9.43.

The results of the experiments show that the narrow rations produced from 11.8 to 18.9 per cent. more milk than did the wide rations, and that they reduced the cost of production from 5 to 12 per cent.

On the narrow rations the cows produced 13.7 per cent. more butter in the first and 8.3 per cent. more in the second experiment than they did on the wide rations. The cost of feed per pound of butter produced was 10 per cent. less per pound from the narrow ration in the first experiment, but only 1.67 per cent. in the second one.

While the so-called narrow rations as used in these experiments were extreme ones, it might be said that narrow rations which contain from 2 to 2½ lbs. of digestible protein in a day's feed, aside from causing a ten per cent. increase in the milk yield, furnish in addition a manure from 10 to possibly 15 per cent. more valuable than do wide rations.

There is no doubt that the narrow rations produce more milk and butter than the wide ones and that by increasing the proportion of protein in the food up to a certain limit the fat content of the milk may also be increased. The market price of the foods fed, however, will be the controlling feature in actual practice as to how far a narrower ratio than that of the feeding standard can be profitably used. There can be no doubt that many dairymen would feed more economically if they paid more attention to the proper balancing of their rations. The store of feed on the farm is generally lacking in nitrogenous substances and consequently too often the ration for dairy cows is also lacking in the necessary amount of protein to enable the cows to produce as much milk and butter as they are capable of doing.