

The 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.

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

Annual Membership Fees:—Cattle Breeders' \$1; Sheep Breeders', \$1; Swine Breeders', 50c.

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 10,000 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. HOBSON, Secretary.
Parliament Building, Toronto, Ont.

Institute Memberships.

The following is a list of the Institutes from which names have been received since the last list published:

Bruce South	1
Carleton	1
Haldimand	1
Hastings East	1
Middlesex East	3

Will Tuberculous Cows Recover?

Chas. D. Woods, Director, Maine Agricultural Experiment Station,
Orono, Me.

For over six years the Station has been studying tuberculosis from different standpoints. In the fall of 1895 a herd of ten cows and heifers that had reacted to tuberculin were placed in quarantine in a specially constructed stable at a distance from other buildings in order that the study of the progress of the disease might be extended over considerable periods of time. The stable was light and well ventilated, the cattle were well fed and cared for. In summer they had the run of a small pasture with feed in the barn when it was needed. In winter they were not confined to the barn, but were turned out in a sunny yard during the middle of the day when the weather was such that they could be comfortable out of doors. The stable was well ventilated, and the animals were not forced to production. Without using any elaborate or extraordinary means the endeavor was made to keep the animals under as healthful conditions as possible.

When placed in quarantine none of the animals showed physical symptoms of being diseased, but on the contrary were as thrifty and vigorous looking animals as could be found anywhere. They were considered diseased simply because they had reacted to the tuberculin test. A thorough physical examination failed to reveal any symptoms of disease aside from a slight cough in the case of two or three of them, and these did not cough any more than many other cows that were free from tuberculosis so far as it could be revealed by the tuberculin test. While different experiments and observations were made upon this herd it may be interesting to note what effect, if any, the good hygienic conditions under which the herd was kept had upon recovery from tuberculosis, or holding the disease in check. The animals are referred to here by number in the order in which they were slaughtered.

No. 1 reacted to tuberculin August 13th, 1895. She was killed January 15th, 1897, at which time she had been diseased nearly one year and a half, although the disease had made little advance. Tubercular lesions of the right lung and two mediastinal glands were found. She had never exhibited any physical signs of disease; at the time she was killed she was decidedly fat. Two guinea pigs inoculated from her died from tuberculosis.

No. 2 was killed February 27th, 1897. It had been over six months since she had reacted from tuberculin, but she had been coughing for over a year, and had not been as thrifty as the rest of the herd. The autopsy revealed only a small area of diseased lung and two large lymphatic glands.

No. 3 was killed June 17th, 1897, in an advanced stage of tuberculosis.

No. 4 was killed July 1st, 1897. She was very much reduced in flesh and weak, and the autopsy revealed a large amount of tuberculous growth, but it was all apparently of recent growth. Three weeks before she was killed lesions of the lungs were detected by physical examination.

The other six animals of this herd were killed October 12th and 14th, 1897, and the following conditions were noticed:

No. 5 had always been apparently well, except that she reacted to the tuberculin test. The only lesions found were in two lymphatic glands, and they showed very slight evidence of disease. Guinea pigs inoculated from these glands and killed after nine weeks showed no evidence of disease. All the evidence we have, therefore, would seem to indicate that this cow had recovered from tuberculosis.

No. 6 had always seemed well except for a difficulty in breathing which had been noticeable for six months before she was killed, and a cough which had been troubling her for over three months. The autopsy revealed lesion of the lymphatic glands and a few small tubercles scattered through both lungs. The lung tubercles had cheesy centres, and were evidently of recent growth.

No. 7 had never shown symptoms of the disease except a slight unthriftiness. The lymphatic glands and both lungs were tuberculous.

No. 8 had always been well; the only lesion found was one cheesy mediastinal gland.

No. 9 had shown no symptoms of disease, the only lesion found was in one mediastinal gland.

No. 10 had always appeared to be well. Two mediastinal glands were enlarged and cheesy.

In his report Dr. F. L. Russell, the Station Veterinarian, sums up these cases as follows:

"A study of these cases shows us, that, kept under exceptionally good conditions as these cattle were, five of them kept the disease in check, so that it made practically no advancement. In the case of three others, but little advancement was made, while in two cases the disease had nearly reached a fatal termination when the animals were killed. On the whole we cannot see that the exceptionally good care that these animals received had any effect on the progress of the disease. It may have retarded the progress of the disease, but if so the fact is not sufficiently clear to lend much weight to the argument that tuberculosis can be successfully controlled by simply maintaining animals under good hygienic conditions. Twenty per cent. of deaths is probably as high a percentage as one could reasonably expect among ordinary tuberculosis herds kept under poor or only fair hygienic conditions, if to begin with all cases that presented any physical symptoms of disease were removed."

Cucumber Blight.

Bordeaux Mixture a Sure Preventive.

During the past few years the culture of cucumbers for pickles has become an important industry in certain sections of the state. Last year, however, the losses due to "blight" were so severe that many growers became discouraged, and the area devoted to this crop will be reduced. The "blight" referred to is caused by the downy mildew which first made its appearance in the United States in 1889. It occurs quite generally throughout New England and the Middle States and as far west as Ohio. In localities where it has previously occurred, it may be expected to reappear the present season; and the range of its occurrence is likely to be extended. The amount of damage done by the disease depends very largely upon the condition of the weather during July and August. Hot and moist or "muggy" weather will induce rapid growth of the fungus; while, if the weather is dry and cool, much less trouble will follow.

By carefully conducted experiments in the cucumber fields of Long Island, it has been proved beyond question that Bordeaux Mixture is an effective preventive of the disease. Spraying should be commenced when the plants first break through the ground and repeated at intervals of ten days through the season. Formula in "Condensed Directions for Spraying the Apple," and the same formula in "Condensed Directions for Spraying the Potato" is the right one to use for the cucumber blight. If Formula 3 is used it will be found effective for the striped beetle as well as for the cucumber blight.

The above directions will be sent free on application.—Maine Experiment Station.