

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 50,000 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.

LIVE STOCK FOR THE WEST.

Another car-load of pure-bred live stock will be shipped to the North-west under the auspices of the Dominion Live Stock Associations, leaving Ontario the last week in June. The following gentlemen have spoken for space: Henry Arkell, Arkell, 6 sheep; W. R. Bowman, Mt. Forest, yearling heifer; A. McArthur, Welwyn, Assa., 2 Ayrshire cows; W. H. & C. H. McNish, Lyn, 2 Guernsey cows and 1 heifer.

There is still space in this car for a number of animals. Parties wishing to send pure-bred live stock to Manitoba or the North-west in this car are respectfully requested to correspond with F. W. Hodson, Parliament Buildings, Toronto.

Farmers' Institute Department.

GROWING SUNFLOWERS.

By Jos. E. GOULD

I have been asked to write a note on my method of growing sunflowers. I attempted some four years ago to put Prof. Robertson's mixture into the silo, viz., Corn, Sunflowers, and Horse Beans. I succeeded with the corn and the sunflowers, but the beans were a total failure. From experience I believe the sunflower adds largely to the value of the silage. The method I adopt is one-quarter acre of sunflowers to two acres of corn. I plant one acre of corn, then a quarter of an acre of sunflowers, two acres of corn and another quarter of an acre of sunflowers. I do not plant the sunflowers in the hills with the corn. I did this once but never after. When we cut the crop for the silo we go across the whole crop, taking the corn and the heads of the sunflowers.

I am a crank on thinking the only sensible way to grow corn is to plant in hills. We mark off our field in squares forty inches each way, and plant the sunflowers in the squares the same as the corn and cultivate the same way and at the same time. It requires about two good stalks to the hill, but sunflower seed is cheap and we plant it with the corn planter and thin out two or three stalks to the hill. About three pounds of seed will plant an acre; enough for

eight acres of corn. Plant Mammoth Russian. Some seed is sold for Mammoth Russian that is not true. Buy from a responsible dealer or you may have a failure.

I do not tell you how you are to get away with the stalks after the heads are in the silo. When you have found out tell your neighbor, but do not tell him until you are satisfied that you have the best plan. I have not got it yet.

Relating to the above subject, Mr. D. M. Macpherson writes as follows:

"I have tried the growing and feeding of corn, sunflowers, and bean mixture for silage purposes, and have found it not sufficiently satisfactory to continue its production, for the following causes: Reduced production per acre of corn, increased expense of securing properly in the silo, and the results of fertility to land for future operations reduced rather than increased. So far as the immediate resultant effects from feeding were concerned, it was found to take less grain to make up a balanced daily ration, but when the reduced amount of corn product per acre is figured, the full fertility results returnable to the land comes far short of a full corn crop. This corn and sunflower mixture takes the same position as corn and grain growing combined for milk or beef production. No farmer can produce all the constituents of a balanced fattening or milk ration on his own farm profitably. The only part a feeder can profitably produce (or purchase) on his own farm is the 'bulk' or carbonaceous, such as corn, and the other main part of a ration can be purchased most cheaply in the open market, such as by-products or grain, peas, beans, oats and barley. By producing the greatest bulk, or carbonaceous part, of feed per acre, and purchasing in the open market that product containing the greatest amount of albuminoids for the least money, we have a combination which acquires a balanced ration at the least money, thereby enabling the farmer to produce 'animal products' at the least cost, and acquire at the same time the greatest amount of outside fertility to return to the soil in the form of stable manure for future uses. This subdivision of a balanced ration of bulk

and nourishment and acquiring each in the cheapest market, fulfils the first principles of success in farming, which is buying animal food and plant food in the cheapest market and to the greatest extent. While acquiring and producing all the elements of a productive animal ration on the individual farm reduces the fertility yearly and limits to a minimum the productive capacity of a farm, this annually becomes less, when, on the contrary, it should be on the increase. For such causes, based on scientific and business calculations and proved by practical demonstrations for the past number of years, I have abandoned the growing and feeding of the mixture of corn, sunflowers, and beans, and even corn and grain."

Ontario Agricultural College.

NOTES FROM THE DAIRY DEPARTMENT.

By PROFESSOR H. H. DLAN.
Cows.

The cows in the department are looking well. Our winter ration of 35 lbs. corn silage, 10 lbs. hay, 20 lbs. mangolds, 3 lbs. bran, 2 lbs. oats, and 3 lbs. pease has maintained the cows in excellent condition and produced a satisfactory flow of milk. We still have a large quantity of silage and will have some for summer feeding if it is needed.

The young calves and heifers are doing nicely. We purpose making an experiment at an early date to ascertain the value of pasteurized and raw skim milk for calves. All calves intended for use in the dairy herd are fed skim milk when three or four weeks old. Meal is added to the milk. This meal consists of bran, oil-cake, and ground oats. They thrive well on this feed. Skim milk is bound to play an important part in the future of Canadian dairying in two ways: rearing the future dairy cows; rearing and fattening the bacon pig. The difference in the profits from milk sent to a cheese factory or creamery will largely depend upon the value of the skim milk vs. the whey. Many are asking the difference in the value of the two by-products.

Dairy Experiments.

Our season for experimental work began April 4th. As usual we are experiencing difficulty in obtaining a regular supply of milk through the season. As Guelph is not a dairy district, the milk supply for school and experimental purposes, at reasonable prices, is a problem not easily solved. The work mapped out for the year will cover the following points:

Cheesemaking.—Mottled cheese, causes and remedy, relation of fat in milk to quantity and quality of cheese (5th year); aeration of milk for cheesemaking; best methods of handling over-ripe milk; effect of rennet on time required for coagulation; dipping at different stages of acid on curd; milling at different degrees of curd ripeness; temperature for putting curd to press; effects of temperature and moisture in curing of cheese.

Buttermaking.—Pasteurization of whole milk and cream for buttermaking; best temperature for separating; effects of heating and cooling, ripening temperature and percentage of starter when ripening cream; moisture in butter, effect of lactation and gestation periods on quality of butter.

Other questions may be investigated as time permits and circumstances require. During the month of June our time is almost wholly taken up with excursionists.

We may add so far as time will permit, the Dairy Department is prepared, assisted by other departments of the college, to investigate any difficulty that may arise in cheese factory or creamery work during 1898. Our dairy interests have now become so important that anything which tends to deteriorate the reputation and quality of Canadian cheese or butter must have the most careful research of our ablest men and best methods.

Different Methods of Creaming.

For three years the Dairy Department of the college has been experimenting as to the best method of creaming milk so as to get the most butter of the best quality from a given quantity of milk. Our plan has been to mix the herd milk well, then divide it into three equal portions and set one-third in the small shallow pan, one-third in deep-setting cans in ice water, and one-third is run through the separator.

The average per cent. of the total fat lost in skim and butter milk during 1893 and 1894 was 2.35 from the separator, 6.1 from deep-setting and 9.05 from shallow pans, or, in other words, for every 100 pounds of butter fat made we lost about 2½ pounds of butter by using the separator, 6 pounds by the use of deep setting cans in ice water, and 9 pounds by using shallow pans. The loss from setting methods is greater in hot weather. The quality of the butter is not so good from shallow pans in hot weather, whereas in cool weather it is fairly good and compares favorably with deep setting and separator butter. In 1895 the results from the three methods during the months of April, May and June were 50 lbs. 6 oz. of butter from the separator; 49 lbs. 11 oz. from deep setting; and 48 lbs. 2 oz. from shallow pan. The loss of fat in the buttermilk was slightly greater from the setting methods.

To show how small things affect milk setting in shallow pans I would mention the fact that one day a window was left open so that there was a draught blowing on the milk. This cream was tough and when strained into the churn there was fully one-fourth of a pound of butter in it that would not strain because of the lumps of cream.

Lesson.—Milk setting in shallow pans should not be exposed to any draught of air, but should be kept in a cool and comparatively moist place so as to prevent drying of the cream. But dampness and mould usually go together and the latter must be guarded against.