

### Farm Poultry Competition.

In order to develop the splendid possibilities of Norfolk County, Ont., in poultry and egg production, P. E. Angle, B. S. A., District Representative of the Ontario Department of Agriculture at Simcoe, and the local Poultry Institute, have worked out a plan which will be put in operation during the coming winter. It will be a competition of farm flocks under farm conditions, for which \$100 in prizes has been subscribed, divided into ten prizes, from \$25, down to \$5. No entry fee will be charged, and any farmer in the County who will comply with the following rules is eligible for entry in the competition, under the following rules:

1. That only those farmers having flocks of 35 or more birds will be eligible for entry.
2. Each farmer entering the competition will keep a daily record of the egg yield of his flock on blanks furnished him by the Association for that purpose, from the first day of December, 1910, until the 31st day of May, 1911.
3. Each farmer entering the competition will keep a financial statement, showing the kinds, amount and cost of food fed to his flock, and the total receipts from the same during the six months between the first day of December, 1910, and the 31st of May, 1911.
4. Each farmer entering the competition will sign a written declaration or affidavit affirming that the record of the egg yield and financial statement of his flock, referred to in rules 3 and 4, and made by him, are correct statements of the truth, and that he will forward the same to the secretary of the association not later than the third day of June, 1911.
5. Any competitor who discontinues keeping the records referred to in rules 3 and 4 at any time during the competition will be disqualified.
6. All entries must be made with the secretary of the association, L. C. Gibson, Simcoe, on or before the 20th of November, 1910.

The judges appointed by the association will visit the farm of each competitor at least once, and oftener if deemed necessary, some time during the competition, in order to see the flocks and to obtain information regarding the flocks and their management from their owners.

The competition will be judged by score-card on the following basis:

(A) Flock	250
(B) House	150
(C) Management of Flocks	450
(D) Egg yield	150

Total possible 1,000

### Fertility and Hatching of Eggs.

It is well known that hens vary widely in the number of fertile and hatchable eggs produced. The Maine Station has been studying for several years the causes of this variation, and the relation between fertility and hatching quality. In a recent bulletin of that Station, Raymond Pearl and Frank M. Surface state, as a result of these studies, that, while "fertility and hatching quality or ability of eggs are two essentially different things," there is apparently a small but still sensible correlation between the two.

This means that, in general, or on the average, the hen whose eggs run high in fertility will also tend to show a high hatching quality of eggs (percentage of fertile eggs hatched), and vice versa.

Conditions of housing have a marked and definite influence on the mean or average fertility and hatching quality of eggs. In certain experiments, discussed in Bulletin 168, it was found that both fertility and hatching quality of eggs were very much better when the breeding was done in a "curtain-front" house, which furnished an abundance of fresh, pure air, than when it was done in what was formerly considered to be a highly-desirable type of heated house, without curtain-front, but with a supposedly adequate system of indirect ventilation.

While there are great individual differences among different females in respect to the fertility of their eggs, even when mated to the same male, it still remains the fact that this character, as compared with hatching quality of eggs, is to a very large degree influenced by external circumstances.

The same relative degree of fertility is not characteristic of the same bird in two successive seasons; nor is this character affected by winter egg production. It is not inherited.

On the other hand, the hatching quality of eggs is an innate constitutional character, just as much intrinsic as any other physical character, such as shape of body or length of limb. Relatively, the same intensity or degree of this character is persistent in the same bird in successive breeding seasons. It is adversely affected by heavy winter egg production. It is inherited.

Any factor which tends to reduce or impair the general constitutional vigor of breeding birds, in general, tends also to reduce the hatching quality of the eggs.

## THE DAIRY.

### Gervais Cream Cheese.

This dainty little cheese is made from a mixture of new milk and cream, the mixture of these two being in the proportion of two parts of milk to one part of 22-per-cent. cream.

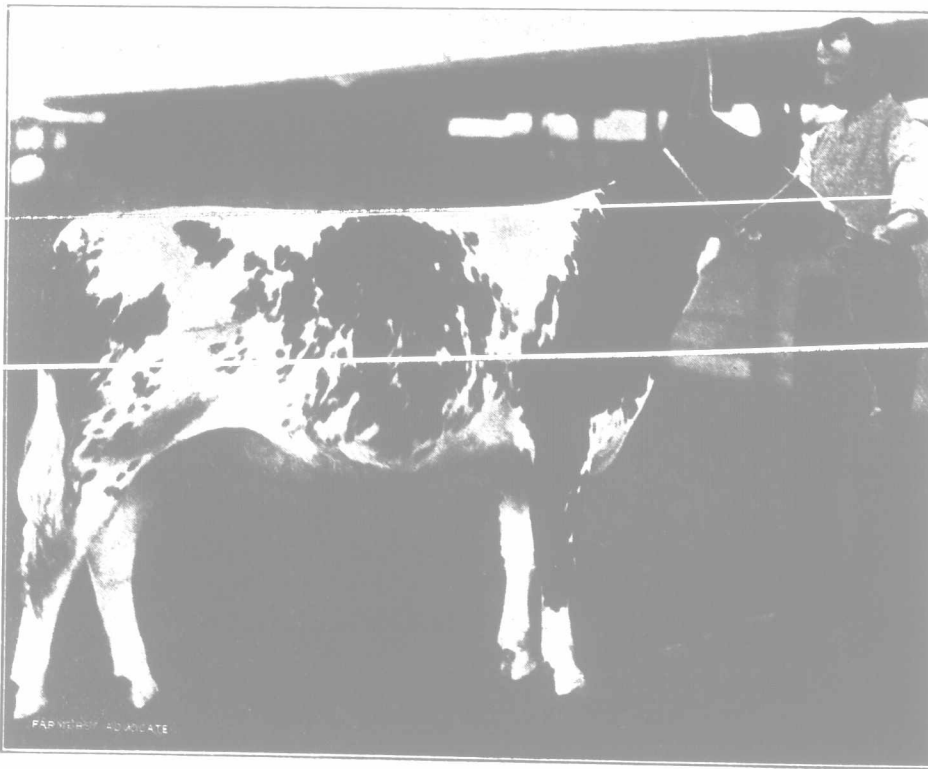
Take a quantity of this mixture, and bring to a temperature of 65 degrees F. Add rennet at the rate of  $6\frac{1}{2}$  drams per 100 pounds of the mixture, or enough to bring a coagulation in three hours. When the coagulum is firm enough, dip out into kucka-back cloths placed over bowls, with a long-handled culture dipper. Then tie up by the four corners and hang to drain. The cloths should be previously scalded, and used wet. After the cheese have been hanging up for a few hours, open out the cloths and scrape down the sides to aid the draining; repeat the scraping at intervals of a few hours, until the cheese are firm enough to mould. Salting is done by means of sprinkling fine dry salt over the cheese, and working in with a table knife or bone spatula, at the rate of one ounce of salt to every four pounds of cheese.

The moulds should be lined with clean white blotting paper, and placed on a scalded straw mat or cloth, and the cheese pressed in with a bone spatula or spoon. In the winter time, a few drops of color added to the milk and cream before renneting, will improve the color of the cheese.

FRANK G. RICE.

### Care of Milk in the Household.

Much effort has been properly put forth to secure the production of milk under cleanly and satisfactory conditions. That this may not fail of its purpose, it requires to be supplemented by an equally thorough campaign of education among consumers. Millions of gallons of fairly good



Yearling Ayrshire Bull.

A Highland Society winner.

milk are contaminated with deleterious and disease-producing bacteria in the households where it is used. From a little circular, distributed with the compliments of the Ontario Department of Agriculture, we quote the following pointers:

"As soon as the milk is received, put it in a cool place, away from the rays of the sun, and not exposed to the heat of the kitchen or dining room. If the bottle is to be placed in a refrigerator or near food products, the outside should be thoroughly wiped and rinsed, thus preventing contamination of the surrounding air and foods from the street dust and other dirt which may adhere to the bottle. Leave the milk in the bottle and the cap on, until such time as it is required for use.

"It is well to have a separate compartment in your cupboard or refrigerator for milk and butter.

"When the milk is placed in an open vessel, it is well to cover it with a clean, damp cloth. Several thicknesses of cotton, wrung out of cold water, will answer the purpose. This will not only protect it from dust, but will also assist in keeping the milk cold.

"All vessels intended for milk should be sterilized, scalded with boiling water, and thoroughly cooled just before being used.

"Do not disturb the milk, or pour it from one vessel to another more often than is necessary. It is well to keep your milk in one undisturbed vessel, rather than a number of small vessels.

"Milk delivered at different times should not be mixed.

"Left-overs should be kept by themselves, and used before the fresh supply is drawn upon.

"If milk is to be kept until the following day, and there is a likelihood of it souring, pasteurize by placing in a double boiler and heating to near the boiling point (170 to 180 degrees F.). Cool as quickly as possible after it has been pasteurized. Always rinse thoroughly the cap and top part of the bottle before removing the cap.

"Open vessels containing milk should not be exposed to foul odors or produce which will flavor the milk.

"To clean milk vessels, first rinse with water, which may be slightly warm, but not hot. Then wash thoroughly with water containing a washing compound, scald, and allow to drain and dry.

"Thoroughly wash milk bottles before returning them to your dealer."

### One of Perth County's Model Factories.

The Avonbank Cheese and Butter Factory is one of the model factories of Perth County, Ont. A gratifying feature of its business is the large amount of butter made during the winter, the patrons recognizing the profit of winter dairying. In consequence of this, the make of cheese is somewhat decreased during the latter part of the summer; but, at the time of our visit, on August 17th, sixteen to seventeen cheese a day were being turned out of the hoops, and the make had been running seventeen to eighteen. As in a number of other factories in this county, the proceeds are distributed among the cheese patrons according to the test. Prof. Dean's plan of per cent. of fat, plus 2, was in vogue for quite a number of years, but as an improvement on this, they have now adopted the plan, per cent. of fat, plus 3. At a factory where the average per cent. of fat in

the milk is inclined to run too low for best results in yield and quality of cheese, Prof. Dean's formula might be preferable; but at Avonbank, where the test runs fairly well during the cheese season, owing to some of the cows being advanced in lactation, the new system adopted may be better. The average per cent. of fat in the milk was 3.5.

A change has been made in the business year, which used to finish on October 31st, but which will now conclude with the end of December, corresponding to the calendar year. Avonbank is one of the few factories remaining where the whey is not returned, but fed to hogs kept near the

factory. The whey is sold for \$3.50 per ton of cheese, and is fed on an adjoining lot. At the time of our visit, 300 hogs of all sizes were in the pen and in the adjoining yards, and a carload had been shipped the previous Friday, averaging about 260 pounds weight. Chopped barley and oats is fed with the whey, and the pigs are allowed to run in the yard for a time, afterwards being confined in the long hogpen shown in one of our illustrations. Besides the pen, 120 feet long, by about 30 feet wide, are two long A-shaped, outdoor sleeping shelters.

The temperature of the cooling-room on the warm afternoon of August 17th stood at 60 degrees. A commendable feature in this room is the system of four steam pipes along the ceiling, designed to keep up the temperature to around 60 degrees in the fall of the year, when otherwise the temperature in most curing-rooms drops rather too low for best results. A splendid water supply is insured by driven wells, and pumped up with windmills. The milk at this factory is in nearly all cases cooled by the patrons in separate tanks especially provided for the purpose. Whey not being returned, all the cans are washed at the factory. The charge for making is 85 cents per cwt. for cheese, and 13 cents a pound for butter, since the cream-gathering system has been adopted. A free house is provided for the maker, who also keeps the post office in the factory. The quality of the milk is tested and practically nothing to be