

THE DAIRY.

Weigh and Test.

In circular No. 102, of the Illinois Experiment Station, is summarized the report of 18 herds, which have been tested for a year, as follows:

1. In the 18 herds reported, including 221 cows, the average production was 5,616.99 pounds milk; 226.63 pounds butter-fat, and an average test of 4.03 per cent.
2. The best herd averaged 350.17 pounds; the poorest, 142.05 pounds butter-fat per cow.
3. The best ten cows averaged 388.75 pounds; the poorest ten, 109.42 pounds butter-fat per cow.
4. The butter-fat produced by the best (on the basis used) was worth \$119.32, while that of the poorest was worth only \$19.58.
5. At least one-third of the cows in the ordinary herds are practically unprofitable.
6. The herds in which grading has been practiced produced 85.47 lbs. butter-fat per cow more than did those in which no grading has been done.
7. The scales and the Babcock test made it possible to remove five cows from a herd of ten and thereby increase the profit \$7.62 per head.
8. This circular shows conditions as they exist on dairy farms of the State, indicating that a few cows are kept at a good profit, some at a small profit, and many at an actual loss.
9. There is but one way to determine the value of a cow—test her.
10. Two serious mistakes made by Illinois dairymen in feeding their herds is their failure to provide silage, and to make a liberal use in their rations of leguminous roughage, such as cow pea, clover and alfalfa hay. Silage should not be fed in condensary districts where objected to, but the leguminous hays should be used freely, as they are easily grown, and, since they replace expensive concentrates to a large extent, they reduce the cost of milk production.

Dairy Exhibit at St. John.

In the Dairy Building, at the late St. John, N. B., Exhibition, were the customary exhibits of cream separators. The sale of separators in the Maritime Provinces during the past two years has been phenomenal. In the sparsely-settled districts it is with great difficulty that a creamery where milk is gathered can become a paying concern. The cream-gathering creamery not proving an unqualified success, home dairying seems the most popular, and the hand separator has revolutionized the dairy industry in many parts of the Province. If the exhibit of dairy butter is any criterion of the quality produced, it speaks well for the home buttermakers of the Province. The exhibits of factory butter were not large, but the scoring was good. The exhibits of dairy butter were numerous and the quality equal in many and ahead in some cases, of the factory-made butter. The buttermaking competitions each afternoon drew large crowds, and were most interesting.

Cow-testing.

The seventh test at Brockville, Ont., as tabulated, giving individual records of over 1,200 lbs. milk in the 30 days ending August 30th, are worth noting. Altogether 8 cows out of the 135 gave over 1,000 lbs. These contrast with the 780 lbs. highest yield in herd 13. Feed for production. Number of cows tested, 135; average yield of milk, 715 lbs.; average test, 3.4; average yield of fat, 24.6 lbs.

The eighth test at Cowansville, Que., with 400 cows, is reported. The milk yield is falling off rapidly, while the average yield of fat is practically the same as in April—19.1 and 19.6 lbs. The highest individual yields of milk vary from 415 lbs. to 920 lbs. for the 30 days ending August 23rd. Average yield of milk, 468 lbs.; average test, 4.0; average yield of fat, 19.1 lbs.

Kicking Cows.

We read all sorts of devices to cure kicking cows. Like balky horses, kicking cows are usually made so by the men who handle them. The best device we have ever seen is to put a ring in the floor overhead, and with a halter on the cow draw her head up pretty taut. She cannot kick very well in this position, and the beauty of it is she does not know what it is that prevents her, as she soon comes to know if a strap is buckled about her legs.—[Hoard's Dairyman.]

A Bruce Bachelor.

I must say I like "The Farmer's Advocate" very much. I don't believe I would be farming now were it not for the encouragement I received from it, and the Quiet Hour too. I sometimes wonder if Hope can realize all the good her (someone has said a lady writes the Quiet Hour) earnest, pleasant chats are doing. I sometimes laugh with Dame Burden's Chatterers—like an old-time quilting bee, isn't it? Wonder if I could get a wife from among them if I called?

BRUCE FARMER.

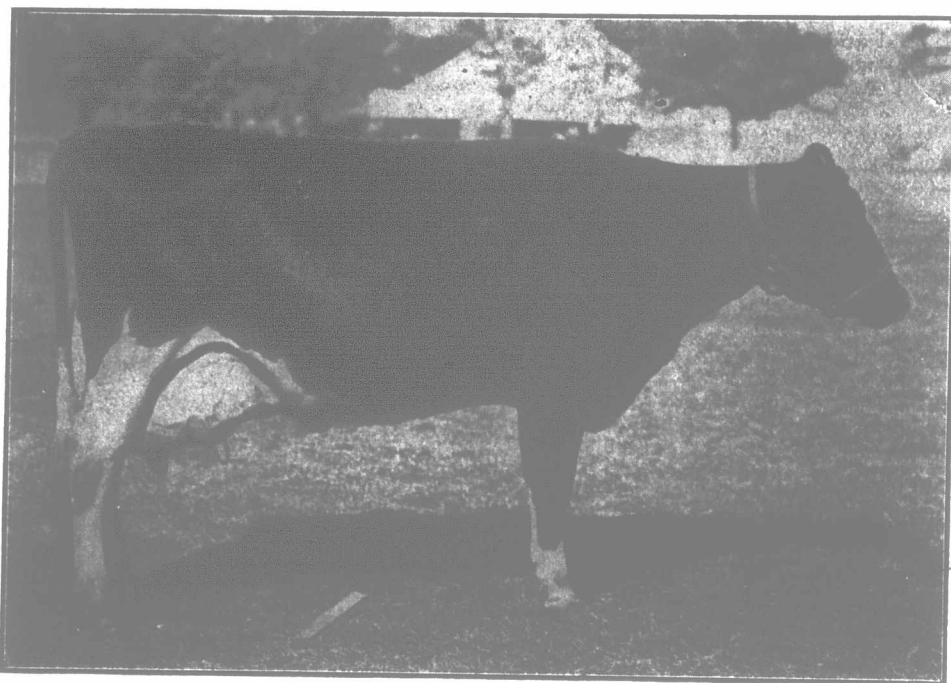
Dairy Products Officially Defined.

The committee on food standards, representing the Association of Official Agricultural Chemists and the Interstate Food Commission, as appointed by U. S. Secretary Wilson, has issued its supplemental proclamation regarding standards of purity for food products. In establishing these standards each definition is so framed as to include, where possible, those qualities which make the article described wholesome for human food, and to exclude other qualities; each definition is also based upon data representing materials produced under American conditions and by American processes, or representing foreign articles imported for American use. The standards adopted to cover dairy products are as follows:

MILK AND ITS PRODUCTS.

a.—Milks.

1. Milk is the fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within 15 days before and 10 days after calving, and contains not less than 8.5 per cent. of solids not fat, and not less than 3.25 per cent. of milk fat.



Favorit 7th (2790).

Holstein cow. First and champion, Toronto and London, 1905 and 1906. Owned by James Rettie, Norwich, Ont.

2. Blended milk is milk modified in its composition so as to have a definite and stated percentage of one or more of its constituents.

3. Skim milk is milk from which a part or all of the cream has been removed, and contains not less than 9.25 per cent. of milk solids.

4. Pasteurized milk is milk that has been heated below boiling, but sufficiently to kill most of the active organisms present, and immediately cooled to 50° F., or lower.

5. Sterilized milk is milk that has been heated at the temperature of boiling water or higher, for a length of time sufficient to kill all organisms present.

6. Condensed milk (evaporated milk) is milk from which a considerable portion of water has been evaporated, and contains not less than 28 per cent. of milk solids, of which not less than 27.5 per cent. is milk-fat.

7. Sweetened condensed milk is milk from which a considerable portion of water has been evaporated, and to which sugar (sucrose) has been added, and contains not less than 28 per cent. of milk solids, of which not less than 27.5 per cent. is milk-fat.

8. Condensed skim milk is skim milk from which a considerable portion of water has been evaporated.

9. Buttermilk is the product that remains when butter is removed from milk or cream in the process of churning.

10. Goat's milk, ewe's milk, etc., are the fresh, clean, lacteal secretions, free from colostrum, obtained by the complete milking of healthy animals other than cows, properly fed and kept, and conform in name to the species of animal from which they are obtained.

b.—Cream.

1. Cream is that portion of milk, rich in milk-fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force, is fresh and clean, and contains not less than 18 per cent. of milk-fat.

2. Evaporated cream, clotted cream, is cream from which a considerable portion of water has been evaporated.

c.—Milk Fat or Butter-fat.

1. Milk fat, butter-fat, is the fat of milk, and has a Saponification number not less than 24 and a specific gravity not less than .905 (40° C.).

d.—Butter.

1. Butter is the clean, nonrancid product made by churning in any manner the fat of fresh or ripened milk or cream into a mass, which also contains a small

portion of the other milk constituents, with or without salt, and contains not less than 82.5 per cent. of milk fat. By acts of Congress, approved August 2nd, 1886, and May 9th, 1902, butter may also contain added coloring matter.

2. Renovated butter, process butter, is the product made by melting butter and reworking, without the addition or use of chemicals or any substances except milk, cream, or salt, and contains not more than 16 per cent. of water, and at least 82.5 per cent. of milk fat.

e.—Cheese.

1. Cheese is the sound, solid and ripened product made from milk or cream by coagulating the casein thereof with rennet or lactic acid, with or without the addition of ripening ferments and seasoning, and contains, in the water free substance, not less than 50 per cent. of milk fat. By act of Congress, approved June 6th, 1896, cheese may also contain added coloring matter.

2. Skim-milk cheese is the sound, solid and ripened product, made from skim milk by coagulating the casein thereof with rennet or lactic acid, with or without the addition of ripening ferments and seasoning.

3. Goat's milk cheese, ewe's-milk cheese, etc., are the sound, ripened products from the milks of the animals specified, by coagulating the casein thereof with rennet or lactic acid, with or without the addition of ripening ferments and seasoning.

f.—Ice Creams.

1. Ice cream is a frozen product made from cream and sugar, with or without a natural flavoring, and contains not less than 14 per cent. of milk fat.

2. Fruit ice cream is a frozen product made from cream, sugar, and sound, clean, mature fruits, and contains not less than 12 per cent. of milk fat.

3. Nut ice cream is a frozen product made from cream, sugar, and sound, nonrancid nuts, and contains not less than 12 per cent. of milk fat.

g.—Miscellaneous Milk Products.

1. Whey is the product remaining after the removal of fat and casein from milk in the process of cheese-making.

2. Kumiss is the product made by the alcoholic fermentation of mare's or cow's milk.

GARDEN ORCHARD.

Electricity as an Insecticide.

Electricity as a possible motor power for farm implements has long been a cherished dream. It now appears that there is a possibility of its being used as an insecticide. The discovery, as in the case of most valuable discoveries, was due to accident. A Monaco (France) engineer, while working with an electrical machine in the open air, had occasion to insert metal rods in the ground and connect them with a dynamo. He observed that, as soon as the current was turned on, all the insects in the ground hurriedly came to the surface. It was argued from this that a stronger current might be found effectual in killing the insects, and further experiments were made. To a Russian has come the greatest success so far. His invention is to place a dynamo on a handcart, with an attachment by which the electricity runs to the ground when the cart moves, and it has been found that all insects so reached by the current have been killed as by lightning. The inventor is confident that he can perfect his apparatus so that it may be utilized in killing insects on plants and trees. Should he prove successful, the question of how to produce electricity in an inexpensive way will become a pertinent one.

Condition of Apples Arriving at Montreal.

The Dominion Fruit Inspectors at Montreal sent in to the Fruit Division, Ottawa, reports of the temperature of five carloads of apples in refrigerator cars, all of which were said to have been fully iced at starting. They arrived at Montreal with temperatures ranging from 64 to 82 degrees. Although this fruit was placed in the cold storage of the steamships, it is extremely likely that there will be a very great depreciation in the quality of these apples when they reach their destination. After having been exposed from the time of packing until they were placed on board steamship to this very high temperature, no cooling could