

in several instances where the lime solutions were used.

4. There was little difference in the quality of the cheese.

5. In the case of pasteurized milk, the lime solutions did not restore the texture and body of the cheese, though there appears to have been a slight improvement in the quality as the result of adding a chloride-of-lime solution to pasteurized milk for cheesemaking.

The next work we did on the question was in 1907. On page 120 of the annual report of the College for that year we read:

"It is doubtful if the pasteurization of milk for cheesemaking will ever become practicable in Canada, for handling large quantities of milk. The labor and expense of heating and cooling from 10,000 to 30,000 pounds milk daily would be very great—in fact, almost prohibitive."

After referring to the work done previously with lime solutions, we give the results of experiments in which from 1½ to 3 per cent. lactic-acid culture (starter) was added to pasteurized milk some time before the addition of rennet. The results were as follows:

1. The whey from the pasteurized lots contained more fat than did those from normal lots—.35 per cent. fat, as against .25.

2. The pasteurized lots produced an average of nearly 11½ pounds more cheese per thousand pounds milk than did similar lots unpasteurized.

3. The cheese made from the pasteurized lots shrank 1.5 per cent. in one month ripening (curing), as compared with 3.7 per cent. shrinkage in the lots not pasteurized.

4. The cheese made from the pasteurized milk scored nearly two points less in quality, as compared with the normal lots.

5. The cheese made from pasteurized milk were softer, and better suited to local than for the export trade.

6. The striking point in the experiments is the very marked increased yield of cheese from the pasteurized milk.

We may conclude by saying that there is nothing new about the application of pasteurization to cheesemaking, as experiments were made in Germany as early as 1896 on the question. While the application of a soluble lime salt or a heavy lactic-acid culture (starter) appears to restore the normal condition of heated milk, so far as rennet action is concerned, it cannot be said to be entirely satisfactory for the making of export cheddar cheese, though it may be useful in small factories catering for the local trade.

The question of labor and expense for heating and cooling large quantities of milk must also be considered. Assuming that pasteurization of milk for cheesemaking is all that its most ardent advocates claim, we doubt whether the present condition of the cheese market would warrant any further expense in the manufacture of cheese. To offset this expense, however, is the extra yield of cheese, which, if it were 14 to 15 pounds cheese per 1,000 pounds milk, would go a long way towards paying the cost of pasteurizing; indeed, it would probably more than pay the extra expense. At present, however, we do not consider pasteurization of milk for cheesemaking practicable nor advisable, except in small lots.

H. H. D.

The New World's Butter Record for Thirty Days.

Chenango County, New York, now has the distinguished honor of producing the best cow for a thirty-day period the world has ever known. The name of this queen of all cows is De Kol Queen La Polka 2nd, and her fortunate owner is Clayton Sisson, of Sherburne, New York. He has been breeding Holsteins for about five years, and this animal he purchased from a neighbor some time ago, paying the sum of \$175 for her. The record made by this marvellous cow is as follows:

Butter record, seven days, was 35.34 lbs.
Butter record, 30 days, was 145.10 lbs.
Milk record, one day, was 124.00 lbs.
Milk record, eight days, was 841.8 lbs.
Milk record, 30 days, was 3,376.9 lbs.

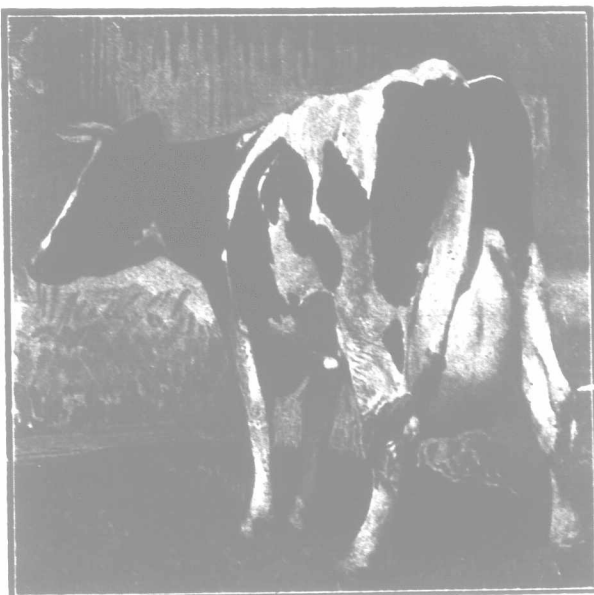
Just reflect for a moment what this means—more than a ton and a half of milk from one cow in 30 days. There is only one cow in the wide world that has ever beaten any of the above records, and that animal was Grace Fayne 2nd's Homestead, owned by H. A. Moyer, of Syracuse. She made 35.55 pounds of butter in seven days.

The cow that has tested nearest the Sherburne animal is Colantha 11th's Johanna, and is owned by Mr. Gilbert, of Wisconsin. Her record is as follows:

Butter record, seven days, was 35.22 lbs.
Butter record, 30 days, was 138.54 lbs.
Butter record, one year, was 1,248 lbs.
Milk record, 30 days, was 2,677.5 lbs.

The cow that previously held the highest one-day record was De Kol Creamelle, and she produced in one day just 119 pounds of milk, but her butter record for seven days was only 28 lbs. She was owned by D. W. Field, of Montello, Mass. When it stops to reflect that the average dairy cow in the State of New York, according to statistics, gives only 3,000 pounds of milk annually,

it seems almost impossible to conceive that this Chenango County cow has produced more than that quantity in 30 days. Stating it in another way, this Sherburne cow has given 124 pounds of milk in one day, or 62 quarts. She gave 3,300 pounds in 30 days, or 1,650 quarts. She is milked four times daily, at 5 and 11 o'clock.



De Kol Queen La Polka 2nd.

This cow gave 3,376.9 pounds of milk in thirty days.

Too Hot to Work.

Some of the old members of cow-testing associations appreciate the system very much, and are realizing a profit by it. In the Shearer, Ont., association, for instance, one man states that he has delivered to the factory almost as much milk from ten cows as he did two years ago from fourteen cows. He has sold one of the ten for \$45 for beef. At her best, she gave 31 pounds of milk per day. She is replaced by a cow costing \$50, now giving 41 pounds of milk per day.

This statement shows the immense saving of labor that can be effected by keeping cows selected on their records. It is too hot weather to work round and bother with four unnecessary cows, if the smaller herd, as indicated above, brings as good a return. If it pays to milk a cow, it pays to milk a good one. The herd needs pruning of the dead, unprofitable wood. Dairy records of individual cows show conclusively which to lop off. Blank forms are supplied free of charge on application to the Dairy Commissioner, Ottawa.

C. F. W.

POULTRY.

Proposed Classification and Standards for Grading Eggs and Poultry.

The committee appointed at the Poultry-producers' Association of Canada, to revise its classification and standards, met at Macdonald College early in July, and the draft of its report has been sent out with a view to securing co-operation and assistance in arranging a system of classification for dressed poultry and eggs.

Those interested in the industry have known for some time that the standardization of poultry products was extremely necessary, and this Association has been asked to get the feeling of producers and dealers on this matter. Those who have given the subject any thought know that the conditions are such that a change is urgently needed.



Fig. 1.

Fig. 2.

Somewhat similar grading to that proposed below has been used for one year. Slight changes, however, have been made to make it a little more workable and to bring it into a little more harmony with classifications and grading used in other countries, especially the United States. Prompt correspondence is solicited by the secretary, Prof. F. C. Elford, Macdonald College, Quebec.

DRESSED POULTRY.

Poultry is first classified into chickens, fowl, cock birds, capons, slijs, ducks, geese, turkeys, guineas and pigeons, and, when packed, there is a

further classification as to size and weight. A standard of grading is set for each class, and all birds packed must conform to that standard.

The term chicken applies to (1) pullets that have not laid, and are under seven months of age; (2) cockerels that have not developed a hard spur, firmly attached to the leg. They are further divided as to weight into broilers and roasters. A broiler usually weighs from 1 to 3 pounds. A roaster usually weighs from 3 pounds and upwards.

The term fowl applies to hens of any age.

Cock birds are defined as all male birds having hard spurs firmly attached to the leg, including mature birds, without reference to age.

Capons are birds successfully caponized when from 6 to 12 weeks old, showing very little comb and no spurs.

Slijs are birds not successfully caponized, and so showing comb, spurs, and generally coarser than capons.

Ducklings are ducks marketed before their first molt, usually from 7 to 12 weeks old, and weighing from three to five pounds each. All ducks not included under the term duckling are distinguished as ducks.

Goslings are geese marketed before their first molt, usually from 7 to 12 weeks old, and weighing from 7 to 12 pounds. Geese proper are subdivided into (a) those under 10 pounds, (b) those over 10 pounds.

Turkeys are divided into young and old hen turkeys, and young and old toms. Young hens, all weights; young toms, under 12 pounds; old hens, all weights; old toms, all weights.

Guineas are divided into young and old.

Pigeons, up to the time of leaving the nest, usually about 4 weeks old, are squabs; afterwards, they class as pigeons.

GRADING.

This grading applies only to roasters, fowl and capons.

All the above classes of poultry are graded before being packed, and a standard is set which applies to these classes.

There are four grades, viz.: Selects, No. 1, No. 2, and Common.

All the birds must be packed uniformly as to size and weights in each package, a uniform weight to mean that birds do not vary more than one pound in weight.

Birds that have been sick or show any indication of disease, birds that have food in the crop, that have decidedly crooked breast-bones; that have blood or other dirt upon their bodies, heads or feet, shall not be included in these grades.

All birds must be dry-picked—roasters and fowl clean, except around the neck. Capons should be dressed capon style. By this is meant the style that has become standard, and which requires that the feathers be allowed to remain on considerable portion of the bird. Leave the feathers on the upper half of the neck; pick the breast clean; pick around the vent, and up to the large tail feathers; pick the entire under side of the wing, all three joints; pick the upper part of the first joint next to the body; leave the feathers on the upper part of the last two joints, including the long wing feathers or flights. Leave the saddle feathers on the back to within 2½ or 3 inches of the tail.

Cooling should be done gradually, but thoroughly, before packing, not dipped in water.

All classes should be put on the market undrawn, having head and feet on.

Packages must be distinctly marked, showing the class, the grade, the number, the average weight and the gross, tare and net weight they contain. See suggested illustration:

GRADED DRESSED POULTRY			
Put up by the			
POULTRY PRODUCERS' ASSOCIATION OF CANADA.			
Class.....	Grade.....	No.....	Av. Wt.....
Gross Wt.....	Tare.....	Net.....	

Selects to consist of specially-fattened birds; extra well fleshed, and of superior finish and appearance; unbroken skin, without blemish, straight breast-bone, and neatly packed in packages that hold one dozen birds. Each package shall include birds of a uniform size and color of flesh and legs.

No. 1 to consist of well-fleshed birds of neat appearance, but lacking the uniform finish of selects; packed in neat boxes holding one dozen birds of uniform size and weights.

No. 2 to consist of fairly-fleshed birds, packed in neat boxes holding one dozen.

Common to consist of any birds not conforming to the requirements of the above three grades, but must not be packed in similar boxes.

EGGS.

Grading.—It must be remembered that all eggs must be shipped new-laid. A new-laid egg is an egg that is not over five days old when shipped; an egg that has been gathered promptly and kept in a moderately-dry, cool place (under 60 degrees), free from foul odors and other contaminating in-