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and, as the cow will almost always respond to this treatment by increased production, the breeder himself will become encouraged and enthused, taking greater pains and greater pride with his herd and the care of them. The Secretary-Treasurer's report proved the Club to be in a healthy condition financially. It was decided to hold the annual auction sale in Campbellford on April 1, 1919. The officers elected are as follows: Honorary President, Wm. Stewart, Campbellford; President, Alex. Hume, Campbellford; Vice-President, E. A. McCook, Campbellford; Secretary-Treasurer, W. E. Tummon, Crookston. Directors: Geo. A. Stokes, Tweed; H. K. Denyes, Belleville; W. J. Haggerty, Stirling; Jno. McCubbin, Warkworth; R. H. Little, W. S. Grills; John Locke; Jerry O'Connor; Campbellford, and W. J. Peebles, Havelock.

The first 1,000-pound Jersey has arrived. She is Sophie's Agness, and has just completed a record of 16,212 lbs. milk and 1,000.07 lbs. fat, with an average test of 6.17 per cent. During the year she consumed 1,095 pounds each of wheat bran and cornmeal, 1,825 pounds gluten feed, 1,460 pounds ground oats and 730 pounds of a commercial grain feed, in addition to alfalfa, clover and beets. It cost \$186 for the 6,205 lbs. grain she consumed and, valued at 50 cents per pound, the 1,000 lbs. butter-fat she produced was worth \$500. Her sire has 35 daughters in the Register of Merit, and her dam is a long-distance champion. Does breeding pay?

Canary Bell, a ten-year-old Kansas Ayrshire, recently completed her fifth and best record of 19,863 lbs. milk and 774.51 lbs. fat. This cow holds the highest record of any living cow in the state, and her new record shows the highest milk production recorded in the American Ayrshire Association's mature class in 1918. Her five records average 15,078 lbs. milk and 572.69 lbs. fat. One of her daughters has a record of 505.5 lbs. fat as a two-year-old.

In paying for milk by test, the per cent. fat plus two method is better for the man sending low-testing milk, but the per cent. fat method is more profitable for the man sending high-testing milk. It makes little difference to the man producing medium-testing milk which method is used.

There is no standard temperature for churning as all good butter-makers know. The most desirable temperature is that which will bring butter in nice, firm granules in from 20 to 30 minutes.

When collecting composite milk samples in herd testing it is better to use enamel paint to number the bottles. Paper labels wash off too easily.

Every time fresh cream is added to the cream can, the cream should be stirred thoroughly from the bottom of the can.

Not only should a separator be kept in a clean place, but its surroundings should also be clean.

Look for the leaks in your business.

POULTRY.

Improving Quality Through Co-Operation.

It is probably true that a greater amount of improvement has occurred through co-operation in the collection and sale of eggs than in almost any other branch of agriculture. While good egg circles and associations dealing in poultry products are still too few in number, and perhaps fewer than in some other lines in normal times, the fact that the hen and hen product are generally considered of minor importance on the average farm naturally led to conditions of marketing which admit of very great improvement. This is especially true when we consider that there is an enormous waste in eggs from spoiling, between the time the hen lays the egg and the time it reaches the consumer. A very great deal of this waste is attributable directly to the carelessness of the farmer and any effort on his part to improve quality through co-operative marketing must be productive of very marked and immediate results.

As in some other lines of agricultural co-operation, Denmark is still the classic example of successful co-operation in egg marketing. From 1895 to 1911-15 Danish farmers were able to restore a trade in eggs with Great Britain, previously lost because of poor methods, and, in addition, Denmark was able to increase this trade from 95 tons selling at a price of \$1.58 per great hundred eggs to 4,661 tons selling at an average of \$2.18 per great hundred. In addition, there is the rather singular fact that eggs were the only agricultural export from Denmark which did not fall in price during this period.

The object of a co-operative egg circle has been succinctly stated to be as follows: "to maintain the quality of eggs as they leave the farm and to place them in the hands of the consumer with the least possible delays and in good condition." In Prince Edward Island, Quebec and Ontario, the co-operative marketing of eggs has made most notable progress, the egg circle idea being most commonly employed in Ontario and Prince Edward Island. In the latter province the circles have been federated into an Egg and Poultry Selling Association with the result that a fairly complete

system has been developed which has given the Island Province a good name in the egg markets. In fact, eggs from Prince Edward have, until recently, at least, been regarded as being of more uniform quality than from any other part of Canada.

In Ontario there were 40 egg circles in 1917 as compared with 36 in 1916, shipping 542,853 dozens of eggs worth \$209,837.31 to the circles, as compared with 382,808 dozen worth \$104,227.36 the year before. The second quarter of 1918 showed 2,441 members shipping 377,881 dozens worth \$151,892.98, as compared with 1,140 members shipping 56,121 dozens worth \$29,299.49, in the first quarter.

In the Western Provinces a marked improvement has also taken place through legislation providing for inspection as to quality. Merchants are now compelled to candle and properly grade eggs before shipment



Warehouse and Grading Station of Dundas Co-operative Association.

but because of the comparative newness of the country the co-operative idea in selling has not been found workable to the same extent as in Eastern Canada. Egg Circles were organized in Manitoba in 1914 and 1915, but these have nearly all disbanded owing to a shortage of supply preventing frequent enough collections to guarantee eggs of first-class quality. The Department of Agriculture now endeavors to encourage better care of eggs, and purchase on a quality basis by the country grocer. In Alberta, egg circles have also failed, largely because of an absorbing interest in wheat, so that as an alternative a marketing service has been established at Calgary, with another planned for Edmonton where eggs will be received, candled, and graded as they are received from farmers and farmers' organizations throughout the province. These organizations are

EGG GRADING CARD

BRANCH 1

1 st Filler	
12	25
15	06
2 nd	25
15	06
20	
3 rd	25
20	06
20	58
4 th	25
20	58
24	
5 th	25
24	06
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provided with a simple plan of organization for egg marketing. In 1917 this service at Calgary, available from June on, was utilized by producers from 23 points and 13,326 dozens were handled. Up to September, 1918, eggs were received at Calgary from 65 points, making a total of 128,580 dozen. In British Columbia no co-operative concerns handle eggs regularly, but farmers' co-operative purchasing societies and creameries occasionally handle eggs for their members and patrons.

Ontario has a few examples of outstanding success in the way of co-operative egg marketing. One of these, and perhaps the best, is the Dundas Co-operative Association, at Morrisburg, in Dundas County. This association has made very great strides in the handling of eggs on a quality basis, so much so in fact, that their product has established a reputation second to none in the Dominion, surpassing in some respects, the eggs from Prince Edward Island, hitherto an outstanding example of success.

The Dundas Association was first organized in March, 1911, with about 35 members, under the name of The Dundas County Co-operative Poultry Association. In March, 1915, the association was incorporated with an authorized capital of \$10,000, allotted in 500 shares of \$20 each. Over 300 shares are now subscribed and are divided among 235 members. Only five per cent. of the share value has been paid in, amounting to one dollar per share; and the association is conducted on the principle of one man one vote. The company is a joint stock company where each member receives a dividend on the business he transacts through the association, rather than on the capital invested. Previous to incorporation the organization was on the basis of a co-operative association without share capital. For lack of capital eggs had to be sold as collected and without grading, the full value received by the association being returned to the members. All the eggs were marketed through a single produce company whose representative was stationed locally and this company attended to the grading.

At the present time a plan is followed whereby two wagons and a motor truck gather the eggs weekly from the farms during the producing season, which lasts from April 1, to about the second week in October. In addition to a very large number of individual farmers marketing through the Association collections are made weekly from 3 egg circles and from an occasional storekeeper who uses the case plan system, mentioned later, and is paid according to quality, receiving a commission of from one half cent to one cent per dozen for collecting, as do the egg circle collectors. He stands the loss of all bad eggs. Collections are made from a radius of about 15 miles, egg circle members and many other contributors not necessarily being members of the Association. These non-members, however, share no dividends of the Association, receiving merely the local market price which is paid to farmers when the eggs are collected.

The wagons travel the same route each day of the week and immediately upon delivery at the warehouse, an illustration of which is given herewith, the eggs are candled, as many as five candles being necessary at times during the rush season. At this time receipts average as high as 60 to 70 cases per day. In order that each member may be credited with the exact number and quality of eggs collected, the "case plan" system is used. The accompanying illustration shows a grading card, one of which is placed on the top of each case as it is filled, the figures and heavy lines showing accurately just where to find each man's eggs in the case. This information is marked on the card by the collector as he fills the case and is for the benefit of the candlers and the office staff who will have to credit Jones or Smith with the right number of eggs and the grade which they belong in. This is necessary since the eggs are sold graded and, dividends being paid according to the business done through the Association, Jones should get more dividends for sending 20 dozen specials than Smith should receive for the same number of Number twos.

Every case of eggs is filled in exactly the same way. A standard egg case holds 30 dozen eggs, 15 dozen on each side of a centre partition, in five layers of 3 dozen each. Each one of the large squares represented in the egg grading chart represents a "filler", put to keep the eggs in each layer from touching each other. The small squares each represent a single egg. The collector begins on one side of the partition and fills it first, beginning with the bottom filler at the left hand corner on the side farthest from the partition. Thus the illustration shows that the first farmer whose eggs were put into this case was numbered "12" and he supplied 14 eggs. The eggs from the next farm (number "15"), filled out this filler and 20 eggs in the next, making 3 dozen in all. When the first half of the case is filled it is turned completely around and the other half is filled in exactly the same way. This is indicated by the fact that the egg grading card must be turned around to read the figures. Thus, number "24" will have some eggs on the top layer of the first half filled and a few (18) in the bottom layer of the second half. When the whole case is filled, the card, properly filled out, is placed on top and serves as a guide to the grader. The eggs from each wagon are deposited in separate places when delivered at the warehouse and are candled all at one time, usually all by the same candler.

On the back of the grading card is a ruled blank similar to the one shown herewith, showing the grading of the eggs in the crate and who they came from. Thus Jno. Smith, whose number is 12, supplied 14 eggs in that week, 6 of which graded as specials and 8 Number ones. Jones, (Number 24,) on the other hand supplied 6 dozen but only 4 dozen graded Number one and there were 5 Number two's, 10 dirties and cracks and 9 bad.