

Alta, 94.25. Farm dairy tub: 1, Miss R. Patton, Richmond Hill, 94.50; 2, Miss L. B. Gregory, Ilderton, 93.75; 3, Mrs. A. Wallace, North Gower, 93.50; 4, A. W. Sorensen, Magog, Que., 92; 5, Mrs. A. Clark, Dundalk, 91.50. Farm dairy firkin: 1, Mrs. A. Clark, 94.50; 2, Mrs. J. Clarkson, Weston, 91.75; 3, Mrs. James Cornish, Woodville, 91.50, (won on davor); 4, A. W. Sorensen, 91.50; 5, Mrs. A. Wallace, 90. Best prints: 1, Mrs. S. Wallace, 96, (won on flavor); 2, Mrs. G. Briton, 82 Arthur St., Toronto, 96; 3, Mrs. A. Clark, Dundalk, 95.25; 4, Mrs. W. J. Barton, 82 Arthur St., 94; 5, Mrs. S. Hill, Parkhill, 92.75. Special.—Trophy won by Achille Fournier, Gentilly, Que. Special prize.—Highest average score: 1, A. Houle, St. Simon, Que.; 2, E. Tessier, Ste. Brigide, Que.; 3, P. Palleson, Calgary, Alta.

After Milking.

Editor "The Farmer's Advocate":

Most persons consider the milking job done as soon as the milk is in, or emptied from, the milk pail, but this is not the case. A very important part of the milking operation consists in weighing the milk from each cow at least once a month; three days each month, better still; but best of all, weigh each cow's milk after each and every milking. With proper apparatus it takes less than half a minute to weigh and record the milk weight from each cow. In order to do this with the least loss of time it is advisable to have in the stable, or in a room convenient to the stable, the following:

1. A milk scale, preferably of the dial-face, two-hand, spring balance type. This may be suspended from a wire, iron or bracket fastened to ceiling or walls of stable, or room. (Some are under the impression that recent Dominion legislation prohibits the use of the spring balance for the dairy, but such is not the case.)

2. The milk pails should all be of similar weight, which can be got by dropping pieces of solder on the bottom of each pail, or by packing soft lead around the underside of the rim. Make all the pails the same weight as the heaviest one, and then set the red hand back on the dial to the weight of pail. For instance, if the pail weighs 3 lbs., and the dial is marked to 20 lbs., set the red hand back to 17 lbs. on the dial, when the black hand is at zero. When the pail of milk is hung on the scale, the red hand gives the weight of milk in the pail, while the black hand gives the weight of pail and milk, or whatever else may be weighed on the balance. This plan saves the trouble of subtracting the weight of pail each time.

3. A milk sheet properly ruled and conveniently fastened on the wall, or on a slanting board, or in a frame having a sliding glass front, with space between the glass for marking weights, with a pencil fastened by string and nail so it will be there when needed, is the method of recording weights. These milk sheets can be got free from Dominion and Provincial Departments of Agriculture, hence no dairy farmer need be without them. If too much trouble to write for the ruled sheets, they may be made from any kind of white or brown paper, having 30 or 31 lines horizontally for a.m. and p.m. weights, and perpendicular lines—one for each cow. The name or number of each cow should be placed at the top of each space between the perpendicular lines. For instance, if ten cows are milking then there should be ten perpendicular spaces, and if for the month of August, 62 horizontal spaces—two for each day, one for morning and one for evening. At the end of the month, the perpendicular lines of figures for each cow are added together, and the total weight of milk for the month is recorded at the bottom. If weighing once a month, multiply the weight of milk given on one day of the month by the number of days in the month. Suppose it is the month of September and the cow gave 15 lbs. milk in the morning and 16 lbs. in the evening. The total weight credited for the month to that cow would be $15+16=31 \times 30=930$ lbs.

If weighing on three consecutive days, or on the 1st, 10th, and 20th of the month, the sum of the three days milking would be multiplied by ten for a 30-day month and ten, plus one day's milk weight for a 31-day month. Some follow the plan of weighing one day each week. During this last June, one of the excursionists told the writer, he follows the plan of weighing every Tuesday. He then multiplies the weight given on Tuesday by seven, and thus makes the weekly total for each cow and adds these for the year's record. There are a great many ways in which the work can be done. Personally, we favor weighing every milking. The main point is to do the work systematically, so that the owner knows what each cow is producing.

TESTING.

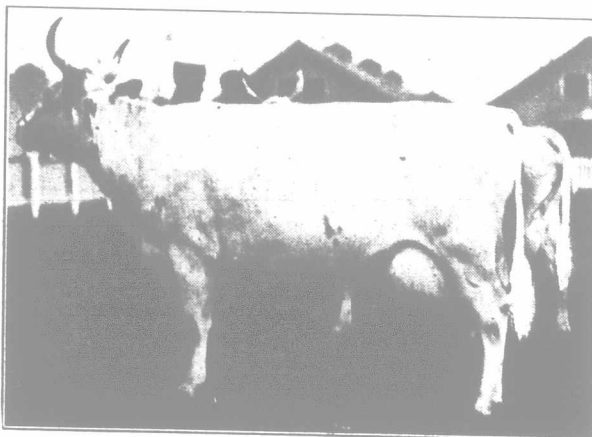
Up to this point we have advised nothing more than each and every owner of cows ought to make a part of his regular practice at milking time. No man can afford to miss doing this much with his cows, but when it comes to testing the milk, we have a much more complicated problem, hence have arisen "official testing," "Cow-testing Associations," etc., which do the testing for farmers at small cost, or free of charge.

We are often asked the question, can a farmer test his cows himself? If so what apparatus is needed and what will it cost? We shall try to answer these questions.

Yes, a farmer can test his cows for himself with the necessary apparatus, but he ought to take a few lessons from a competent teacher, so as to learn correct methods, and in order to have confidence in his work. The process is not difficult, but there are a few points which can be gained only by experience, and this is best obtained under the guidance of a person who knows how. After a few lessons, a person can test not only his or her own cows, but there is no reason why he or she may not do some testing for neighbors who would be quite willing to pay five cents a sample for testing whole milk, skim milk or cream. In fact, we think this should be a part of the teaching in public and high schools, so that the older boys and girls may do the testing at home and for friends.

The apparatus needed for an ordinary farm is a four bottle Babcock testing outfit complete, which will cost about five dollars. However, if much testing is to be done, or the herd consists of over ten cows, then we should advise a larger machine—an 8, 12 or 24-bottle machine, and preferably driven by steam or electric power. A small motor in a school could be used for driving Babcock tester, cream separator, churn, etc., thus the pupils would learn two lessons—how to test milk and how a small motor may be used on a farm where electric power is available. A small motor can be attached to an electric light wire, and this will drive a number of small machines on the farm.

In addition to the Babcock tester for fat, there is needed hot water and small bottles for taking samples from each cow. Two or four ounce,



Buchan Spottie.

Ness' winning aged cow, in milk, at Toronto.

screw-top bottles, or small vaseline bottles are all right for taking two to four samples in, but where samples are taken daily for a month, then ordinary pint milk bottles—one for each cow should be provided for the composite sample. A suitable preservative must also be put into each sample bottle at the beginning of the test period and the bottles must be kept corked tightly. The preservative must be got in tablet or powder form from a drug store or from dairy supply firms. We use a 3:1 potassium bichromate-crossive-sublimate preservative in powder form. Place in each pint bottle about what will lie on a five cent piece. In hot weather add another lot about the middle of the month. If possible, keep the samples in a refrigerator or in a cool place in hot weather.

Each sample bottle should have a label or number correspondingly to each cow. Some use metal tags, some roughen a place on the bottle with a wet file and write a number with pencil, and some use gum labels pasted on the bottle and coated with white shellac so they will not rub off when the bottle is washed.

At the end of the month the composite sample is tested with the Babcock for fat, then the bottles are emptied, washed, fresh preservative is put in, and they are ready to use again. The preserved milk must not be given to live stock, as it is poisonous and will kill man or beast. The preservative should always color the milk yellow, or blue, or some other decided color, so there is no danger of anyone drinking it. After testing, a cow which produced 930 lbs. milk for the month, if her milk test 4 per cent fat, then we should credit her with $930 \times 4 = 3720$ lbs. fat, which is equal to 43.4 lbs. butter, or practically 43 lbs. We get this by adding the rule of adding one-sixth to the milk fat. One-sixth

of $37.2=6.2$, which, when added to 37.2, equals 43.4 lbs. butter. In this way we may know the butter producing capacity of each cow without churning the milk or cream separately, which is not practicable as a rule.

For permanently recording monthly weights of milk, tests, milk fat, cost of feed, profits, etc., neat herd record books may be had free from the Dominion Dairy Commissioner at Ottawa. These should be filed in a convenient and safe place for reference, so that the owner of a herd of cows may know the record of each cow in the herd for a year and for a series of years. This work is the very foundation of successful dairy herd building. No one who owns, feeds and milks a herd of cows for profit can afford to neglect these "after-milking" operations.

O. A. C.

H. H. DEAN.

HORTICULTURE.

Vegetables at Toronto.

The show of vegetables in the Field Crop Competition at Toronto this year was one of the best ever held. Some of the largest, smoothest and highest quality vegetables we have ever seen being on the tables. The following is a list of the prize-winners:—

TOMATOES.—1, C. Aymer, Humber Bay; 2, C. H. Aymer, Jr., Humber Bay; 3, I. A. Farquharson, Ottawa; 4, D. Dempsey, Stratford; 5, R. Dengate, Ealing; 6, C. A. Wilson, Sarnia, R.R. 3; 7, C. McConnell, Hull, Que.

CELERY.—1, A. Carlton, Lambton Mills; 2, J. Harris & Son, Belleville; 3, N. Sanderson, London; 4, W. Trott, London West; 5, P. J. Jean, London, R.R. 8; 6, F. F. Reeves, Humber Bay; 7, P. A. Bell, Humber Bay.

ONIONS.—F. F. Reeves; 2, Chas. Aymer; 3, Jno. Tizzard, Humber Bay; 4, V. Robinette, Tecumseh; 5, H. Coldrey, City View; 6, I. A. Farquharson, Ottawa; 7, Thos. Barwell, Fenwick.

POTATOES.—1, W. E. Crandall, Ingersoll; 2, J. J. Davis, London; 3, H. W. Grummett, Echo Place; 4, Jas. Dandridge, Humber Bay; 5, Henry Broughton, Sarnia; 6, Cooke Bros., Cataraqui; 7, Chris. Dent, Sarnia.

FARM BULLETIN.

South Peel Ont. Notes.

As we sometimes look ahead on a spring day over the summer's work we become anxious as to its accomplishment, but with the improved machinery and proper division of crops the summer has become a time of comparative ease, and the fall and winter is the time of most strenuous effort, especially on stock and dairy farms. The fall wheat crops of this district was below standard this year, very few fields going over 20 bushels per acre, but with the increased price wheat growing is arousing the interest of a large percentage of farmers. The oat crop was the best for years, both in quality of grain and length of straw. Our agricultural society gave several prizes for the best five acres of oats. The farmers who follow this up reach a high standard. The most popular variety this year was the O. A. C. No 72, although the winning crop was Yellow Russian. The winners find a ready market for their seed. The corn crop and root crops are above the average, and bespeak plenty for the stockman. The apple crop is better than last year. The dairy farmers are beginning to realize the importance of summer feeding, either pares ahead for this is not numbered with the with soiling crops or silage. The man who pre-growlers, but takes an optimistic view of the situation, for his success stimulates him to still better efforts. Permanent pasture is also growing more popular because of the harm done by cattle when allowed to roam over every part of farm tramping young clover and tramping in wet weather. All crops considered, we can safely say that farmer dairymen, stockmen and gardener will enjoy the fruits of a bountiful harvest.

Peel Co., Ont.

JAS. B. ROSS.

A Middlesex, Ont., correspondent writes: "The fall wheat seeding of 1914 began at several points during the week ending September 5th. The counsel given in 'The Farmer's Advocate' last week on this subject was timely and to the point, but, judging by isolated cases, had not apparently reached all. There will be disappointing results from attempting to grow as exacting a crop as wheat upon land lacking in fertility and tillage preparation. Corn, aftermath and pastures are all making great growth with the frequent heavy rains, but more sunshine is now needed to mature the first-named crop and to stiffen the land prior to harvesting and silo filling."