

at once, it will not, as a rule, need any preservative.

In order that patrons may understand the effects of increased or decreased feed and speed, and the effects of allowing too much of the bowl flushings to go into the cream at the end of the run, a word on each of these may be in order, although they have been frequently referred to in dairy writings during recent years.

All cream separators are made to run at a certain speed in order to do efficient work. While a slight variation below normal speed will not cause any serious loss of fat in the skim-milk, it is always well to run the machine at, or slightly above, the speed advised by the manufacturer. Whenever the speed drops below normal, the skim-milk is not so completely separated from the cream which results in cream with a lower percentage of fat—or it lowers the test. Generally speaking, a drop of one revolution of the handle per minute means one per cent less fat in the cream.

On the other hand an increased speed above normal causes more complete separation of cream and skim-milk, which means cream that tests higher—as a rule, an increase of one revolution per minute of the handle above normal, adds one per cent fat to the test of the cream. (The foregoing rules are not absolute as the results vary with different types of separators and with various conditions.)

On account of speed being such an important factor in the separation of cream from milk with a centrifuge, or what is commonly called a separator, there should be some simple arrangement on a separator so that the operator may know at any time by a glance, whether or not speed is normal, or above, or below. We understand that such an attachment can be now purchased, but they are rather expensive, and there is some doubt as to their reliability.

All separators have some feeding device whereby it is impossible to overfeed the machine, so long as the feeder is working properly, but the height of milk in the supply-can seems to have some effect on the volume of milk which flows into the separator. If the supply tank be kept filled all the time during the run, more milk will pass out and into the bowl, and if speed be constant, this causes more skim-milk to go with the cream, causing a lower test. On the other hand, if the tank have only a small quantity of milk in it at any one time, less milk tends to run out in a given time, and if speed be constant, the separation is more complete and the cream tests higher.

Some use warm water for flushing the separator bowl, and others use skim-milk. In either case, if too much be used to flush out the cream at the end of the run and the excess is allowed to go in the cream pail, it results in lower testing cream. The cream spout should be closely watched, and as soon as the cream is all out of the bowl and spout, the cream pail should be removed and another vessel be put under; or the spout should be turned to the skim-milk vessel. There is always some danger of turning the spout against the bowl and injuring it, hence it is better to use another vessel to catch the last of the flushing, and not run the risk of denting the covers by turning them while the bowl is running.

When these points are considered, we see how easily there may be considerable difference in the test of the cream from one run as compared with another, and also why there may easily be quite a difference between the tests of cream as given at the creamery, and that made by a disinterested party.

The farmer or cream-producer is practically at the mercy of the cream-buyer, and there seems to be no practicable plan of overcoming this system. On account of this, the man who sells cream is inclined to question the accuracy of his tests—sometimes with good reason. He then appeals to some disinterested party, and when there is a difference between the tests of the two parties, there is likely to be trouble. It certainly is a complicated problem, and the solution does not appear to be in sight at the present time.

O. A. C., Guelph, Ont.

H. H. DEAN.

On Milking Machines.

Editor "The Farmer's Advocate":

In reading over the article in your paper of September 10th, on "Milking Cows," by Prof. Dean, of the O. A. C., one cannot help but be struck with the fact that the Professor is not in favor of the mechanical milker, and I think this article may have much weight in inducing many who might otherwise view it favorably to think the machine is a dream of the future.

Now, let me say, personally speaking, that as we have used our machine only five months we are not eligible to speak definitely; but could you Mr. Editor not ask, through the medium of your valuable paper, for users of a year or more to give their opinion on this machine that is as yet in an experimental stage.

We have in our neighborhood a dairyman who keeps only pure-bred Jerseys, he has used the mechanical milker for some ten or twelve years,

and is at present (I believe) milking some fifty cows, a man should learn a lot about any machine in that time. One great objection to these machines was in the cost; being prohibitive to the average dairyman. Last December a machine quite reasonable in cost was introduced into Canada, and since then about four hundred have been sold to Ontario farmers. This machine by having a small pump for each unit does away with the large vacuum pump and piping, and takes only about 25 per cent. of the power required for some other machines; and, as far as the writer can see, does fully the equal of the other machines known.

Ontario Co.

F. H. WESTNEY.

Dairy Products at Ottawa Fair.

Dairy products this year sprang into the lead over previous years by three times as much butter and a quarter more cheese. The quality was good in most products, and, considering the month of August, makers should be complimented on the quality of cheese they put out. Following are the awards in butter and cheese, and where two names are joined together the scores for their product are equal, and the prize money is divided equally between them.

Cheese.—August colored: 1, Geo. Empey, Atwood, Ont.; 2 and 3, Benjamin Howes, Atwood, and C. G. Wiltsie, Vankleek Hill; 4, Frank Lewis, Kempville; 5, Benson Avery, Kinburn, Ont., and Roy Hastings, Atwood, Ont. August white: 1, Henry Youn, Listowell, Ont.; 2, Roy Hastings; 3, Geo. Empey; 4, Donald McFee, Vankleek Hill, Ont.; 5, Wm. Morse, Trowbridge, Ont. June colored and white: 1 and 2, John C. Donnelly, Scottsville, Ont., and Jos. D. Henderson, Smithfield, Ont.; 3 and 4, Jas. A. Ferguson, Mallorytown, Ont., and Henry Youn; 5, Donald Menzies, Listowell, Ont.

BUTTER.—Dairy prints: 1, Owen A. McLaughlin, Knowlton; 2, Mrs. Alex. Meldrum, Wyman; 3, Mrs. J. O. Connell, Manotick Station; 4, Alf. Wallace, Northflower. Dairy tubs: 1, Mrs. Alex. Meldrum; 2, Owen A. McLaughlin; 3, Mrs. J. O. Connell; 4, Mrs. J. H. Pillar, Winchester. Special tubs: 1, Mrs. Alex. Meldrum. Creamery butter, 56-lb. box: 1, Adjutor Servais, St. Hyacinthe, Que.; 2, Jos. E. Pelletier, St. Morton, Que.; 3 and 4, Albert Bourbonnais, St. Polycarpe, Que., and Alf. Loisselle, St. Jean de Matha, Que.; 5, Oliver Brault, St. Sabine, Que., and Ovide Nathier, St. Clet, Que. Creamery prints: 1 and 2, Edward Frechette, St. Felix de Valois, Que., and P. Palleson, Calgary, Alta.; 3, Alf. Loisselle, and W. Jackson, Marketville, Alta. Special salt prize: 1, Edward Carter, Corbyville; 2, Benjamin Howes. Syndicate prize: 1, Robt. Thomson; 2, Thos. Whattham.

BUTTER-MAKING CONTEST.

Following is the list of the prize winners in the butter-making competition:

Free for all class: 1, Miss R. Patton, Richmond Hill, Ont.; 2, Mrs. A. Wallace, North Gower, Ont.; 3, Mr. A. Lapalme, St. Hugues, Ont.; 4, Mr. Jno. Anderson, Renfrew, Ont.

Amateur class: 1, Miss Flora Sylvestre, St. Simon, Ont.; 2, Miss Blanche Sylvestre, St. Simon, Ont.

HORTICULTURE.

Propagating Currants.

Many gardeners at this season of the year become interested in the propagation of much of their berry stock. Enquiries of late concerning currants have been numerous and the season is rather late at present for fall cuttings, yet winter cuttings may be made and placed in the cellar for transplantation in the spring. The old-time custom has been to take the cuttings during the latter part of August and the first of September, and plant them at once in the nursery row. Usually they are placed about six to eight inches apart in rows three feet apart, and so deep that only the top bud or two will be above ground. This depth insures a strong root system and a vigorous plant. The cuttings should be made about eight inches long, and cut off squarely at the base. The lower cutting should be made quite close to the bud, as this assists in the callousing of the injured part and facilitates rooting. The cut should be made at the upper end at least half an inch above the top bud, so there is no danger of the wood drying out past that point of growth.

The season designated as being suitable for taking cuttings is past, of course, but some growers in the Niagara District use the slacker winter months for this work. Under this system the cuttings are taken in the late winter, and placed in moist sawdust in the cellar. Here the cut ends will become calloused and rootlets started. When the season opens in the spring and the land is fit to receive them, the cuttings are placed out in the rows and growth continues as under the former method, only under very favorable circumstances the fall-set cuttings may be a little further ahead.

Prospects for Fruit Marketing.

Fruit prospects are rather discouraging, as a result of the troubled state of foreign markets and conditions. Added to this we hear that Great Britain has a very heavy fruit crop. Old Country commission merchants are of the opinion that there will be a market for about half of a normal crop, mostly No. 1 grade on present outlook, as No. 2 and No. 3 grades are usually the apples of the working classes who are now only partially employed. It is stated also by English manufacturers that unless export orders are forthcoming for their products, they may have to close down altogether for a time. A London report of market conditions states that Canadian apples will meet with but a fair demand and low prices for the first half of the season—better prices are then looked for. Early shipments of Ontario apples stand a much better chance in Liverpool, Glasgow, and the north of England.

A considerable factor in the shipment of apples to Great Britain will be the increased freight rates, coupled, as it is, with prospective lower prices than ordinarily. There is also extra cost of refrigeration varies of from 10-6 down to 5 per ton weight or measurement, according to the temperature required by the shippers. For winter apples, cars consisting of one-third Spys, balance other varieties, two-thirds No. 1, \$2.00 to \$2.25 per bbl. f. o. b. shipping point, should be a very fair price to make sales at present.

The recent cold, wet spell has had its effect on the apple and pear crops by inducing Ink Spot or Sooty Fungous, especially in the lower and more shaded parts of the trees where the fruit did not dry out so readily during the day. In some orchards the Ink Spot is so bad as to considerably lower the grade of the fruit.

A late attack of Apple Scab has also been induced by the unfavorable weather. It shows itself in the form of small, red spots scattered over the apple, giving at first sight the appearance of San Jose Scale.

Showing Fruit at Fall Fairs.

When showing fruit at fall fairs exhibitors should pay attention to the little details in order to win coveted prizes. There are many things which meet favor in the eyes of the judge, and although the quality and appearance of the fruit may be presentable yet the variety goes a long way in winning the preference of the one making comparisons. Fall varieties do not show up as well as the later kinds at fall fairs. They may have better color, but preference is given to the hard winter variety, especially if it is arrived at any degree of maturity. There seems to be an ephemeral or passing appearance about the early fruit, and exhibitors should bear in mind that to make their exhibit of varieties, especially those classes calling for several varieties, the very best they should include as many as possible of the winter or late fall varieties.

Since the science of fruit growing has become so well known and so widely practiced, the idea of exhibiting faulty specimens is an insult to the fair, and indicates an outcropping of antiquated methods of culture. The quality of the fruit crop of 1914 is good indeed, but a commercial and an exhibition specimen are two different objects. The former should be good, but the latter must be faultless to be really classed in the category of show stuff. Growers know how hard it is to secure a cob of corn or specimen of fruit that is near perfect, but it is easier in the latter class to attain perfection, and scabs and worm holes should debar an entry from winning any prize, even if it is the only one in the class.

POULTRY.

Poultry at the Ottawa Fair.

If numbers are any criterion by which to judge the poultry exhibit at the Ottawa Fair was superior by far to that of any previous year. The entries were approximately double those of last year, and the quality was equal to anything that has been shown, so we are safe in saying that the exhibit of 1914 was the best ever put on at the Central Canada Exhibition. A parrot, distinguished by being the only one present, was sponsor for the whole tribe and certainly did his duty. A fair proportion of this increase in numbers appeared in the utility classes, making the Barred Rocks, Wyandottes, Orpingtons and Dorkings a very good display indeed. Leghorns were strong too, and the Bantam classes and water fowls were well filled. The turkey exhibit was good in all classes, and there was some strong competition in Pekin ducks and Indian Runner ducks. On the whole the coops containing two, and some times three birds, where they were mostly entertained singly last year, was conclusive proof that a large increase had taken place.

Chief among the principal winners were—Barred Rocks: G. H. Taylor, Osgoode; A. H. Switzer, St. Marys, and Hintonburg Poultry Yards, Ottawa. Wyandottes, white and golden: G. Hignan, Sr., Ottawa. Buff Wyandottes: J.