

## The Care and Handling of Milking Machines

### Suggestions for the User and Prospective User

**S**EVERN different kinds of mechanical milking machines have been operated under varying conditions for periods of from six months to five years by Prof. Larsen, of the South Dakota Experiment Station. The results of his experience are summed up in the following nine points which contain many valuable suggestions, both for users of the milking machine and those who contemplate installing them.

1. Before the milking machine is installed, cull out the cows having very uneven quarters, and teats that are extremely small and extremely large. Even though the milking machines may have a large range of adaptability in this respect, uniformly shaped udders and teats are advantageous.

2. The operator should know how each cow in the herd gives down her milk, and how she milks mechanically, and adjust the work of the milking machine according to the individual cow.

3. The cows that gave only small amount of milk and habitually release their milk little by little are not best suited for mechanical milking.

4. Breed and raise cows that are adapted to mechanical milking by, first, selecting a herd sire that comes from ancestors having good udders and teats and that milk well, or select a tried bull that is known to put good udders and teats on their daughters; secondly, by not raising the daughters of the cows that have abnormally shaped mammary organs and that are known to give down the milk irregularly.

5. The operator of the milking machine should understand how to adjust the parts and the workings of the milking machine to the different cows. He should have a mental picture of how each cow in the herd releases the milk, and how the work of the machine harmonizes with the individual cow and the cow must work together and not at cross purposes.

6. The operator should take time to prepare the cow. He should see that the teats are all in normal condition. When most cows, the machine should not be attached until the cow has given down her milk.

7. With some cows, and rear the end of the milking process, the teat cups will climb upwards. The lower part of the quarter is thus wedged in to the upper part of the teat cup. This may shut off the flow of milk. The operator should gently pull down on the teat cups to release this grip or pressure before the machine is entirely detached. If this bothers much, a weight may be suspended from the lower part of the teat cup during milking. By gently lifting and pressing the halves of the udder in the latter state of milking just previous to detaching, it will help the machine to milk the cow dry.

8. If the above points are observed, many cows need no stripping. The operator soon learns from the amount of milk and from the look of the cow's udder whether the cow is milked clean. However, to be sure, the operator should try every cow by hand. This should be done at once after milking. It may be accomplished by shutting the vacuum off and stripping directly into the teat cups, holding the cups in the left hand and stripping with the right; or it may be done by stripping into the pail.

9. The different parts of the milking machine should be kept sanitary by thorough cleaning, and by keeping the parts in a disinfectant solution between milkings such as previously described.

## Best Oil the Cheapest

By E. R. Gross, Colorado.

**M**ANY a man has been surprised to be told that he saw his whippers off. Yet this is exactly what he does when he shaves. Examination of the edge of a well-sharpened razor, under the microscope, shows not a smooth edge, as was once supposed, but a series of more or less regular teeth. This saw-tooth edge is the junction between the two surfaces of the blade and cannot be avoided. If this is the condition on a highly polished razor blade, continues Mr. Gross, what enormous hills and valleys must one expect to find on the surface of the ordinary polished bearings used in machinery and motors. These rough surfaces, rubbing together, produce friction, which reduces the efficiency of any machine. Roller or ball bearings overcome friction to a considerable extent, but there are places where they cannot be used. In these cases oil takes their place. Oil actually works very much like ball bearings, the two sliding surfaces rolling over little globules of oil.

Just as in the case of ball bearings, the little globules of oil are never "chipped" so that they no longer roll easily. When this time comes it must be renewed. Oil that has become black from use has left only a small percentage of its lubricating qualities.

The best grades of oil are most resistant to the destructive causes, heat, friction and wear, which cause it to deteriorate. For most uses, a cheap grade of oil costs more in the end than a good grade. Even the best grade must occasionally be replaced. Probably the hardest task oil is called upon to perform is to lubricate the piston and cylinder of an engine which are exposed to the intense heat of burning gases. For this purpose the oil cannot be too good.

# Bread Making Contests At Rural School Fairs

PRIZES—Free Courses at Macdonald Institute, Guelph

Free Poultry Raising Courses at Ontario Agricultural College

Free Cook Books and Magazines

Over 1,500 prizes in all will be offered in bread-making contests which will be held this fall at over 250 rural school fairs taking place in Ontario. It will be a great event at the fairs and will stimulate interest in bread-making among young girls between the ages of 12 and 17 years.

Here is a wonderful opportunity for your daughter to win for herself a Free Course in Domestic Science at the famous Macdonald Institute, Guelph. All she has to do is to bake one double loaf of bread and enter

it in the contest at the fair according to the conditions explained below and more fully told in the folder we will send you on request. The loaf must be baked with

## Cream of the Best Flour the hard wheat flour guaranteed for bread.

This is a splendid flour which makes the lightest, budging loaves—whitest, lightest and most wholesome bread you ever baked. Is this not a splendid opportunity to interest your daughters in breadmaking?

**Here are the Splendid Prizes offered for the best loaf of home baked bread with Cream of the West Flour.** The following are offered at each local fair:

1st Prize.—A paid-up subscription to "My Magazine" for 1 year. This magazine is full from cover to cover every month with articles suitable for young people of all ages. It is published in England. Value \$2.50 per year.

2nd Prize.—A 6-month paid-up subscription to "My Magazine." Value \$1.25.

**Retra Prizes.**—When entries exceed ten a 1st prize will be awarded of 3 one paid-up subscriptions to "My Magazine." When the number of entries exceeds twenty the judges at the fair will award 4th, 5th and 6th prizes of one year's primary manuscript to "The Little Paper." This is a wonderful little publication issued every month in England. Its eight pages are packed with highly engaging information and stories relating to history, nature-study, animals, bird-life, etc.

**Important.**—The winners of 1st prizes at the fairs automatically become competitors for the Provincial Prizes. The second half of the double loaf is sent to Ontario Agricultural College, Guelph, by the district representative of the contest provided. The judging is done by Miss M. A. Purdy of the Department of Breadmaking and Flour Tasting at the College.

**Provincial Prizes.**—The winners of first prize at each local fair compete for following Provincial prizes. The first and second prizes, or third and fourth prizes, will be awarded in any one country.

1st Prize.—(Short Course 3 months) in Domestic Science at Macdonald Institute, Guelph. The Macdonald Institute does not accept students under the age of 17 years; if the winner be less than 17 we present her with a certificate entitling her to take the course when she reaches the right age. Value of course \$75.00, which pays for fees, room, board and washing. The winner lives at Macdonald Hall while taking course.

2nd Prize.—(Short Course 3 months) in Domestic Science at Macdonald Institute, Guelph.

3rd Prize.—(Short Course 4 weeks) in Poultry Raising at Ontario Agricultural College, Guelph. Girls taking this course do not live at the College, but good boarding houses will be secured for them in Guelph. Value of course \$35.00, which pays board of student in Guelph. (No fees are charged for the course.)

4th Prize.—(Short Course 4 weeks) in Poultry Raising at the Ontario Agricultural College.

5th to 20th Prizes.—The Famous Boston Cooking-school Cook Book by Fannie Merritt Farmer, latest edition (1914). There are 217 thoroughly tested recipes and 150 photographs, reproductions of dishes, etc., besides much special information.

## Conditions of the Contest

Every girl may compete at the rural school fair in her district, whether or not she attends school, providing that her 12th birthday occurs before Nov. 1, 1916, or her 13th birthday does not occur before Nov. 1, 1916. One loaf of bread must be submitted before Nov. 1, 1916. The loaf must be 8 inches long, 4 inches deep, and divided into twelve loaves so that they may be separated at the fair. The loaf must be baked with Cream of the West Flour. One loaf will be judged at the fair. The other half first prize loaf will be sent to Ontario Agricultural College, Guelph, to compete in the Provincial Contest. The loaf entered at the fair will be considered under the same rules as all the other regular contents at your fair.

The standard by which bread will be judged will be as follows:

1. Appearance of Loaf.....	15 marks
(a) Color.....	5 marks
(b) Texture of crust.....	5 marks
(c) Shape of loaf.....	5 marks
2. Texture of Crumb.....	40 marks
(a) Firmness.....	10 marks
(b) Softness.....	10 marks
(c) Grain.....	10 marks
3. Flavor of Bread.....	45 marks
(a) Taste.....	20 marks
(b) Odor.....	25 marks

Each loaf must be accompanied by the part of the flour bag containing the face of the Old Mill (Important) and an entry card on which the girl and parents or guardians state the date of birth, P.O. address, and giving name of dealer from whom Cream of the West Flour was purchased. The form will state

that the girl actually baked the loaf entered in the competition. The forms will be provided at the time of the fair. The decision of the judges is final. Not more than one entry may be made by one girl and not more than one prize will be awarded to the same family.

**The Results of the contests at the fair will be made known in the usual way as in the case of all the other regular contents.** The Provincial results will be announced as soon as possible after the conclusion of the Rural School Fairs in the Province.

**Do Not Miss this Great Opportunity:** Every girl between 12 and 17 years should compete. What a splendid way to stir up increased interest in breadmaking! Get a supply of Cream of the West Flour at your dealers and practice using it as often as possible to increase your skill and experience.

Write for a copy of the Contest Folder to be sent by mail to the Campbell Flour Mills Co., Ltd., Toronto, and they will promptly tell you the nearest place to get it.

**No Competitions in Counties Named Below:**

The competitions are open to all parts of the province where Rural School Fairs are held, except the districts of Hurley River, Kemora, Macdonald and Thunder Bay. These districts are the only parts of the province where school fairs are held by the Department of Agriculture in which this competition will not be a feature. There are no district representatives of the Department of Agriculture in the Counties of Huron, Perth, Wellington, Haliburton, Prescott, Russell or Lindsay, and no rural school fairs are held in these Counties by the Department of Agriculture. We regret, therefore, that the competition cannot include these Counties.

If you cannot get Cream of the West Flour in your neighborhood, write us for price.

Address Campbell Flour Mills Co., Limited, (West) Toronto