



## Alpha Gas Engines

# SAVE

**Work** No more operating your pump, turning your cream separator, running your churn or washing machine by hand.

**Time** No more hauling your feed to the mill to be cut or ground, or hiring someone to come to your place and grind it for you. A small cutter or grinder and your Alpha would always be ready.

**Fuel** The Alpha uses gasoline or kerosene, and much less of either than any other make of engine.

**An Alpha Gas Engine will soon pay for itself on your farm**

Write today for our catalogue which describes in detail all the twelve sizes of Alpha Gas Engines and shows who the farmer who buys the Alpha gets the most for his money.

### THE DE LAVAL COMPANY, Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos, Alpha Gas Engines, Alpha Churns and Butterworks. Catalogue of any of our lines mailed upon request.

MONTREAL PETERBORO WINNIPEG VANCOUVER  
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

### Greatest Labor Saving Invention of the Age

For the Farm and Private Home

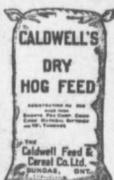


This wonderful Automatic Churn makes perfect butter in from one to three minutes. Most sanitary churn in the world. Nothing but glass touches the cream. No saucers, paddle-wheels, etc. Self-cleaning in 15 seconds. No corners, cracks or crevices to scrub. Operates with a slight pressure of finger. No strength or power required—vibration steel springs does the work. A child can operate this churn successfully.

Free You should investigate this marvelous time trouble and labor-saving churn. Write-to-day for free, descriptive literature. Don't wait—get posted NOW.

THE HAMILTON AUTOMATIC CHURN CO.  
414 King William Street Hamilton, Ont.

## Bacon for the Boys on the Battle Line



Will you help produce it? If you require meal to help balance the ration for your hogs give Caldwell's Hog Feed a trial. Our hog feed has found favor with many large feeders and breeders of hogs, and it therefore should be of special value to the patriotic beginner who is keeping a hog or two in the back yard, and knows little of their food requirements.

Feeding instructions come with every sack, and on the sack you will note the government analysis. The purity and uniformity of this food is guaranteed.

Do not delay ordering Caldwell's Hog Feed from your feedman; or write to us direct. Insist on getting CALDWELL'S.

### The Caldwell Feed & Cereal Co., Limited

Dept. 1 DUNDAS, ONTARIO

Manufacturers of all kinds of stock and Poultry Feeds. (Capacity 100 tons daily).

### The Makers' Corner

Butter and Cream Makers are invited to send contributions to this department, to ask questions on matters relating to the industry, and to suggest subjects for discussion.

#### Washing the Cream Separator

LIKE all other milk utensils, the separator should be cleaned thoroughly immediately after each time it is used. Merely rinsing the bowl with warm water after use and taking it apart for washing but once a day is a filthy practice and must be condemned. All parts of the separator bowl, together with the other tinware, should first be rinsed with lukewarm water, then thoroughly scrubbed with a brush in warm water in which washing powder has been dissolved. Soap or soap powder are liable to leave a soapy film on the utensils and should not be used. Soda ash or one of the commercial dairy cleaning powders is satisfactory, as either is easily rinsed off. The utensils should then be sterilized by means of the farm steamer or boiled for five minutes. The use of a dish towel or cloth for drying is not necessary or desirable, because the hot utensils will dry themselves, and in order they may remain sterile they should be handled or touched as little as possible.

The thorough cleaning and sterilizing of all dairy utensils is essential to the production of butter of good flavor. Unclean utensils harbor bacteria that, when the utensils are used again, contaminate the milk and cream and develop bad flavors and thus injure the butter.

#### Progress in Manitoba Dairying

MORE than twice as much butter was exported by Manitoba during the first five months of 1918, as during the first five months of 1917. This year, up to May 31st, 56 carloads were sent out of the province; last year 25 carloads during the same period and the cost was the whole year. This latter figure, again, compares with a total of 58 cars for the whole year in 1916. Thus our exports prior to June last, this year, with the grass season only a few begun, are only two cars short of the number for the whole 12 months two years ago.

All our butter now is going eastward to Montreal where it is being taken for export for the Allies. All shipments are being made in 56 pound solid, and, on the basis of 409 boxes per car, at present prices, each carload is worth close to \$10,000. Thus Manitoba's butter exports this year should considerably exceed one million dollars in value.

Cream grading in Manitoba creameries is now fairly general, but, according to Dairy Commissioner Gibson, the creameries are not grading with sufficient accuracy. This, of course, is due to the keen competition among the factories for cream. The highest grade of sweet cream, known as "Specials," brings 2 cents above No. 1, and this is 3 cents above No. 2 cream. The present tendency is for creameries to accept too much No. 2 cream at No. 1 price, or rather, No. 2 cream too easily. The present day market demands a mild, clean-flavored butter, which can be made only from practically sweet cream. It is a common complaint that cream is delivered too ripe, with too much acid, thus resulting in too highly flavored butter which will not hold in storage.

Pasteurization is almost universal at the Manitoba butter factories; over 99 per cent. will be pasteurized this year as a large number of up-to-date vats have been installed.

"What is proper pasteurizing, and how does it affect the keeping quality of butter?" To this question Mr. Gibson says that sweet cream pasteurized by heating to 170 degrees and held at

that temperature for ten minutes will produce butter that will keep in cold storage with practically no deterioration for 12 months or longer.

The application of the Storck test, which has now for some time been carried on by the Dairy Branch, has been very satisfactory. By this method the dairy officials determine whether pasteurizing has been properly done. At rural points the travelling inspector tests the cream in the factories he visits; in the laboratory of the Department of Agriculture the test is applied to representative samples of butter. The test works perfectly, and Mr. Gibson claims that by this method the partition now tests and grades a carload of butter it can, to all practical purposes, tell just how much cold storage it will stand before deterioration. All carloads of butter are graded by representatives of the Department.

At time of writing the creameries in Manitoba are receiving 43 cars at point of shipment for "special" grade butter; 42 cars for No. 1, and 40 cents for No. 2.

Not only is the butter trade good, but a new milestone has been passed in the cheese industry. No longer ago than the year 1916 between 50 and 60 carloads of cheese were sent to Manitoba for local consumption. This was greatly reduced in 1917, and today, for the first time, a carload of Manitoba cheese is on its way to consumption elsewhere. In fact, the first carload left for Montreal to be graded and shipped overseas. This cheese netted 21 cents per pound at the factory.

#### Difficult Churning

THE farm buttermaker sometimes fails to obtain butter after churning the usual length of time; in fact, 55 churning is sometimes prolonged for several hours without obtaining butter. The causes of the difficulty, together with the remedies, are as follows:

1. Churning temperature too low. It may be necessary, under exceptional conditions, to raise it to between 65 degrees and 70 degrees F.
  2. Cream too fat or too rich. It should contain about 30 per cent. butterfat.
  3. Cream too sweet. If ripened to a moderate acidity it will churn more easily.
  4. Churn too full. In order to obtain the maximum concussion the churn should be not more than one-third full.
  5. Ropy fermentation of the cream preventing concussion. This may be prevented by sterilizing all the utensils and producing the milk and cream under the most sanitary conditions. If additional measures are needed, the pasteurization of the cream, with subsequent protection from contamination, and ripening it with a good starter, will be effective.
  6. Individuality of the cow. The only remedy is to obtain cream from a cow recently fresh or a cow that is known to churn easily, and before ripening mix it with the cream that is difficult to churn.
  7. The cow being far advanced in the period of lactation. The effect may be at least partially overcome by adding, before ripening, some cream from a cow that is not far advanced in the period of lactation.
  8. Feeds that produce hard fat. Such feeds are cottonseed meal and timothy hay. Linseed meal, gluten feed, and succulent feeds such as alfalfa and roots tend to overcome the condition.
- In order to overwhelm the profits demanded with increased acid, thus contribute to the success of the Western Canada Irrigation convention, which will be held at Nelson, B.C., July 24, 25 and 26, the people of Nelson have not only agreed to give a show until the same time. The boundary country is famous for its flowers and fruit, and delegates to the convention are entertaining visions of roses far and away, the cheer to the appetite. It is said that both will be available in greatest profusion.

### Mr. Fa

at that time, it emphasize our minds on the to what the United States, in a letter to Colonel Ross afterwards, Pre

"The amount we would want of business Canada and the world make use of the United States for all their Chicago and bank credits and a great increase of Canada for use this is an greatly made it a good one."

We all know extremely capable as well as political at once what they mean to do would thus appreciate the Canadian political blind to the reciprocity that hardly a valid operation in the national standpoint not be foolish to place our own existence in the hands of Mr. T. to believe that the assurance of E. Great Britain is all parts of the closer commerce the war trade.

helped to create happy Empire ought to be a part of peace response national and of thought and plan and more in the past.

"Hostility by agenda being was once against the Canada that is the tariff benefit the man express all other the farming concern, in fact, one of the paragraphs in a throughout by manufacturers, by quoting from June, 1893, a "But I appeal the face of the fifteen years un was introduced party, which was