

# FARM AND DAIRY & RURAL HOME



DEVOTED TO  
**BETTER FARMING  
AND CANADIAN  
COUNTRY LIFE**



Comm. of Conservation  
Asst. Chairman Jan 19

Toronto, Ont., January 31, 1918



THE WINTER HARVEST OF OUR NORTHLAND.

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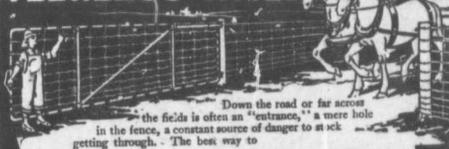
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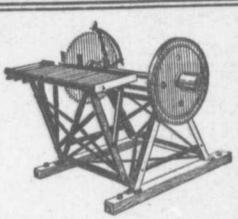
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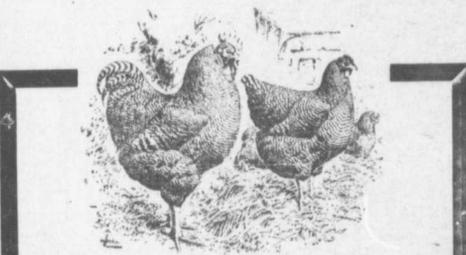
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Now is the time to have your orders coming in for these. Bird and poultrymen are now getting ready for the spring hatch. They are on the lookout for supplies. Get your name before these fellows. Do it now, before they have placed their spring orders. Your best time to start will be, our

### Poultry, Orchard & Garden Number

Published Feb. 7, 1918

This issue will be devoted almost entirely to poultry questions and better flocks. It will be a great stimulus for pure breeds on hundreds of farms, or a change of breeding strain.

Whether it is ducks, geese, turkeys, or one of the many breeds of hens, have an attractive advertisement with us on the above date.

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Sleep on an advertising proposition if you want to, but don't fail to wake up before Farm and Dairy goes to press.

## Cholera Treatment Effective

Swine Regulations May be Changed as Result of Investigations in the United States

As a result of the satisfaction obtained by the swine breeders in the hog belt of the United States through the use of vaccination for hog cholera, the committee appointed by the Canadian Swine Breeders' Association, consisting of the president, F. J. McEwen, Wyoming, J. E. Brethour, Burford, and the secretary, R. W. Wade, have recommended this treatment for cholera-infested regions in Canada. The committee spent a week in the States of Illinois, Iowa, and Indiana, studying the methods and results of this treatment and their return interviewed Dr. Torrance, Dominion Veterinary Director General and consulted with him as to what changes he might be able to recommend in our quarantine laws. Dr. Torrance assured the committee that he would recommend the following changes: That the present regulations dealing with the importation to Canada of pure bred swine be amended so as to allow double-treated pigs to enter Canada, providing that the pigs were sold at least thirty days after double-treating and that they would be subject to a thirty day quarantine at the port of entry. Also that where any country or countries desire to use the double treatment in controlling hog cholera, that he would recommend that permission be granted to such country or countries to be subject to supervision and quarantine.

Most satisfactory results have been obtained through the double treatment in United States—that is, treatment with serum and virus simultaneously. The committee found that all the shown and 99 per cent. of the breeders of pure bred hogs in Iowa double-treat. In one year after the introduction of this treatment, the loss from hog cholera in Iowa was reduced from \$30,000,000 to about \$3,000,000.

In both the state of Illinois and Indiana the committee found it to be the general practice of swine breeders to double-treat. Immense numbers of hogs are raised in these states and without this treatment this would be impossible. It is found that when breeding hogs can be rendered immune to cholera there is greater opportunity to raise the standard accordingly because the stock is not periodically destroyed. In many cases farmers stated that by using this treatment over a period of years, they had reduced their hog losses from above 30 per cent. to one per cent.

In the United States two treatments are used whereby hogs are immunized against cholera, the "single" or "serum alone" and the "double" or "simultaneous." Serum is obtained from hogs which have been not only immunized but have recovered, and when injected into a pig it will render only a temporary immunity, covering a period of five or six weeks. Serum cannot set up the disease in healthy hogs and consequently its use does not expose a herd to any danger. Virus, on the other hand, is a preparation of the blood taken from cholera hogs. It will in susceptible pigs, produce the disease.

The single, or serum alone, treatment consists of the inoculation of swine with serum to establish a temporary immunity. In the double, or simultaneous treatment, serum and virus are injected at the same time, imparting to the hog a lasting immunity to cholera.

To obtain virus young, healthy pigs are inoculated with serum alone in order to set up the disease. In about seven days they are killed and the blood from them is filtered. The filtrate which contains the disease-producing properties is mixed with a preservative and stored in a cool place. Every hog has a number and a chart is kept on which are reported

the temperatures and all information concerning him when both dead and alive. After being bled he is "post-d" (sent for post mortem examination) and sent to the lab. Any evidence of tubercular or other contagious diseases would at once condemn the product of his blood. To test the potency of the virus a pen of eight pigs are used; six receive both serum and virus alone. The two virus pigs should develop the disease if the virus is potent; and if the virus is potent, any "breakers" in the remaining six would show something wrong with the serum.

In the production of serum the hog is first immunized in the usual way by vaccination with serum and virus. In the vicinity of 100 days he is "hypered," or hyper-immunized by injecting into a blood vessel of his body five cubic centimeters of virus per pound live weight. This amounts to approximately one quart of virus to a 200 pound hog and at the plant of Pittman-Moore it is injected through a blood vessel in the ear, by what is ostensibly a very simple operation. This produces a "hyper" or hyper-immunized hog, from whose blood the serum is obtained. About ten days after hypering the hog is bled and four to five c.c. of blood are drawn per pound of live weight. In seven days the hyper is bled again and a similar amount of blood is extracted. At the expiration of the next seven days the hyper is killed and all his blood is preserved. In killing, about 2,000 c.c. of blood is obtained from a hyper. The hypered hog, in case is post-d, and after passing inspection goes into the cooling room and later is processed or cured for human consumption. It is governed most thoroughly and wholesomely in every detail. After a hog is hypered, it must gain in weight until killed in spite of the tall bleeding. The same record is kept on each individual as on the case of virus pigs. The charts then form the office records and all serum and virus, which must have its aerial number; can be traced to the animal from which it was taken. Laboratory tests are then carried through and a thorough bacteriological examination made of the product. All hogs are prepared for bleeding or killing just as carefully before a patient is "processed" before an operation. The Government constantly on the job and cleanliness, sanitation and disinfection are everywhere characteristic.

### United States Milk Prices

The price of milk to the New York trade was set for January at \$3.47 a cwt. for three per cent. test with a four cent per point bonus for a higher test. This will average the producers about \$3.50 a cwt. for the milk and if the average test of a herd of 3.8 per cent., the milk will bring \$3.82.

The Boston Milk Commission has fixed the following prices: Quarts delivered at retail prices at purchased at stores, 12½ cts.; producers will receive eight and one-half cents a quart f.o.b. Boston, which means about seven cents at the farm in districts where the milk is short. Be remembered that the United States quart is not as heavy as the Imperial quart used in Canada.

The Interstate Milk Producers' Association in interpreting the Philadelphia market, fixed the price for January at \$3.63 a cwt. f.o.b. Philadelphia for three per cent. milk with a bonus of four cents for every one-tenth point above this test. The net price to mixed farmers per cwt., for three per cent. milk will vary from \$3.21 to \$3.46 depending on their distance from the market.



# AND RURAL HOME

The Recognized Exponent of Dairying in Canada

We Welcome Practical Progressive Ideas.

Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chatham

VOL. XXXVII

TORONTO, ONT., JANUARY 31, 1918

No. 5

## Are Record of Performance Regulations in Need of Revision?

D. C. Flatt of Hamilton Would Favor Drastic Changes. A 300-day Test and a Shorter Period Between Freshenings Among His Suggestions

THREE or four years ago the various associations of dairy cattle breeders in Canada debated the advisability of revising the Record of Performance regulations. Under the present regulations the test extends for the full period of 12 months and the cow is allowed 15 months for the period called for a 300-day test period and freshening in 13 months. In none of the conventions did the proposed changes find sufficient support to carry. In the convention of one dairy breed association the subject could hardly be said to have been discussed at all. In another the subject was discussed a few supporters, but even they were lukewarm in their advocacy. In the third association change was keenly debated and the motion of then the subject has never been officially discussed, but unofficially, in press and in private conversation, it has been up for consideration ever since and many converts have been made to the idea of "commercializing" the R. O. P. Test. One of the most recent of these to declare himself to Mr. D. C. Flatt, of Hamilton, an ex-president of the Canadian Holstein-Friesian Association.

"Why should we want more from a cow than a strictly commercial production?" asked Mr. Flatt of an editor of Farm and Dairy, who had an opportunity of discussing the question with him in a recent issue. "I want to see this test brought down to a fair, honest basis. It is not on such a basis at present. Take the case of two breeders. One of them may have lots of money and be able to hire the most skilled labor and as much of it as he wants. He will be able to provide every condition favorable to his milk production. He can milk his cows as many times a day as he wishes. That he will have to wait 15 months for a calf is a matter of no consideration with him.

"Then consider the man with little money. He is the man in the majority in every breeders' association. He cannot keep an abundance of labor around him. He can't take time to milk three times a day and he can't afford to wait 15 months for a calf. He is therefore handicapped to start with. He may have only one cow that he would think it worth while to enter in the R. O. P. under present conditions, and the chances are he will not enter her. He will argue that he cannot give his cows the same chance as the other fellow and his comparatively small records from a good cow will look insignificant beside the record made by the other fellow with a cow that is no better. He will reason that running his cow he is simply booming the other fellow's stock while the other fellow's stock will sell at a premium, due to the conditions under which the record is made."

"Then you consider that customers do not consider the conditions behind the records?" we suggested.

"The Customer's Viewpoint.

"Ninety per cent. of the buying public are not conversant with all the conditions that enter into record making," stated Mr. Flatt emphatically. "The average customer who comes to my place never asks how many times the cow was milked. He is not familiar with that point at all. Even if I say to him that my cow was milked only twice a day a great many men

would not know that milking three or four times gives a cow a wonderful advantage. The chances are he will go away and buy a bull for a big price with a big record behind it made under the most artificial conditions when he could get a better bull from the other fellow for less money."

"And what changes do you propose in present regulations, Mr. Flatt?"

"My idea is to put the R. O. P. test on a basis of 300 days' test, twice a day milking and a calf down every 13 months. That breeding limit should come down. We should get away from that abnormal condition entirely. I want to see the test on a commercial basis. In making changes such as these you would not only protect the less fortunate breeder, but detract from the value of the cow in no way would add to the value of the cow by giving her a record that would stand the full light of publicity.

"I want to test with a basis that is fair and honest to everybody, so that no man will have an advantage over another. I want to emphasize that all that breeders should have an equal chance. Then there you have one cow today in R. O. P. you will have 50. Figures out for yourself the good cows that will be brought out that are never heard of today.

"In addition to all this, you are going to encourage men to do better feeding and whole herds will be entered in R. O. P. Instead of one cow or a few cows as at present. The weighing and testing of thousands of dollars, will become well high universal in pure-bred herds. Best of all, there will be a greatly increased production of milk!"

### Where Opposition Comes From.

We suggested to Mr. Flatt that the changes he proposed would meet with strenuous objections from many breeders in his own and other associations.

He replied with conviction, "Any man who objects to this programme wants to hold for himself some advantage that the other man is not in a position to take. The opposition will come from those who are considering themselves first and the good of the breed and the industry second."

"How about past records? Will not the new records look rather small by comparison?"

"I know that that will be one of the objections raised, but it could always be mentioned that these records are made under new rules. There may be some confusion for a time, but I notice that a business flat never makes any changes never makes any advancement."

"How about the United States records?"

"We are already laboring under a handicap so we will be no worse off than we were before. We will hope that United States breeders will also see the advisability of bringing their tests down to a utility basis and move along with us."

"You would like all of the dairy breed associations to cooperate in bringing about this change?"

"Yes, I would like to have all breeders work together in rearing a new standard. Each breed would work under the same regulations and each breed could establish its own standards to relate to the various classes as they do at present. After all it doesn't matter what the breed standards are, what the prospective purchaser asks is not 'did this cow qualify in R. O. P.?' but 'What record did she make?'"

"I fully believe," concluded Mr. Flatt, "that, with the changes mentioned, so many cows would be entered in R. O. P. that buyers would have no difficulty in locating tested cattle dealers could assemble large shipments with ease, there would be more intelligent breeding, and I believe a tendency to do away with all inferior bull calves that should have been done away with long ago. And let me state again my belief that those who oppose such a change will do so selfishly, wishing to retain for themselves advantages which they believe are not open to the majority of their fellow breeders."

The subject is now open for further discussion. Changes in R. O. P. regulations may come up for consideration at the annual conventions of breeders' associations in Toronto next week. The columns of Farm and Dairy are open for an expression of opinion on this subject, which is of vital importance to every breeder of dairy cattle.

## Reducing the Hogs' Meal Bill

Let Roots, Hay and Pasture Help

Prof. G. E. Day, Guelph, Ont.

A POINT which counts against the hog in the eyes of the farmer is the fact that in order to finish it, it must be fed considerable quantities of concentrated feed, and when concentrates are high in price, as they are at present, the farmer is inclined to cut down on his hog production. Everything considered, therefore, it would seem that the present is an opportune time to study very carefully the possibilities of reducing the amount of concentrates in the ra-

## CALAMITY JANE

CALAMITY JANE was just a cow—just cow!

Stuffed with rib and low of brow,  
Gangly-shanked and seemed to be  
A proper cow for a milk like me.

None of yer blue blood in her veins,  
Just a cow for a man that can't take pains;

Just the sort of a cow your folks has got  
A eatin' grass in the pasture lot.

Me an' Calamity Jane was twins  
In bein' poor, an' they ain't no sins  
But the world'll give ye quick as scat.

But it ain't so keen on farm'in' that  
Calamity Jane, she did her best—  
She at my farm from east to west,  
Up hay and corn she at her best.

But 'er ribs kept sayin' 'spaverty' still,  
An' she was plain—

But I sort of liked the anny bruv  
With her bony mouth and kinkin' foot,  
She counted 'mine' when the 'sessor  
come.

And she sorts out me the local name  
Of bel, the leener o' cows an' sich,  
An' me neighbors that I was growin'!

An' the land was jumpin' five dollar a year,  
So Calamity Jane kept a stayin' here.

Then a neighbor of mine came along  
An' he said my dope was all dead  
wrong.

An' he figured it out that for feed and care  
'Bout all I get was hide and hair.

"An' ye know," sez he "when yer notes  
she'd only fetch ye a pot o' oise;  
An' ye'll pardon me, neighbor,—I'm  
speakin' plain—

Yer a fool for to board Calamity Jane."

So I figured it out with our creamery  
man  
What the average wuth o' her milkings  
ran;

An' I tell ye, straight as yer sittin' there,  
She was wuss nor a vampire, hide an' hair.

The schoolin' my children couldn't net,  
The work an' worry that made us fret,  
Our 'middle an' 'scrimplin' of hand an' brain  
Wuz goin' to board Calamity Jane.

So I swapped off Jane an' three head more  
Fer a cow I wouldn't a tetch ed—  
Smooth an' silky an' what wuz best  
That had stend the Babcock test;  
An' if you've an hour or two to spare,  
I kin show you the best herd any-where.

An' a meal in our new house'll make  
That 'stealin' plain—  
That we've left off boardin' Calamity  
Jane.

—Heard's Dairyman.

tion of the hog and still provide a fattening ration. Roots are a somewhat expensive crop to handle, but the advisability of growing even a small patch of mangels or sugar beets for winter hog feeding is well worth a consideration. Experience has demonstrated that roots can be used in such a way as to lessen very greatly the amount of meal necessary to fatten hogs. A plan which has been used successfully, both at the College and on farms throughout the Province is to pulp the roots, moisten the pulped roots with hot water and mix them with about an equal bulk of dry meal. The moistened roots moisten the meal and cause it to adhere to the roots and the whole constitutes a palatable and satisfactory ration for winter feeding. Sugar beets are preferred by pigs to mangels, but mangels are more easily grown and pigs take them quite readily. Turnips are not quite so palatable to pigs, but they can be taught to eat them if accustomed to them from the start. When practicable, bolting turnips makes them quite palatable and enables one to greatly reduce the consumption of meal. Bottled potatoes have a higher value than roots, and when cheap flour is available small potatoes should never be allowed

to go to waste. Breeding sows can be maintained throughout the winter with a very light meal ration if they are supplied with roots and some fine quality alfalfa hay or red clover hay, alfalfa being the best. The hay may be fed dry in a rack similar to a sheep rack and is very much relished by pigs, even young pigs will take considerable hay of this kind, but they should not be expected to depend upon it to the same extent as older pigs.

**Supplementing With Pasture.**  
For summer feeding, pasture crops seem to offer the most convenient means of reducing the meal ration. Alfalfa makes an ideal pasture when available, but red clover, especially young red clover, is greatly relished by pigs and can be utilized in reducing the meal ration. A thickly seeded mixture of grains such as oats and barley, or corn and wheat, if acre makes a capital pasture quite early in the season. If it is not desired to pasture the mixture early in the season it can be cut for hay and the clover will then come along and form an ideal pasture for any class of pigs. Rape may also be used as a later pasture crop, and by changing the pigs

from one field to another, crops such as rape and clover may be pastured and repastured several times. Another plan which has been tried in some places, and which is worthy of consideration, is to plant a few acres of corn which will mature in the district in which we live. In this district, and in similar northern localities, a very early maturing variety would need to be used. A crop such as this, however, will supply a large amount of feed for hogs and the corn may be husked and fed to the hogs and the stalks may be utilized by feeding the cattle, and hogs may be turned in to harvest the crop for themselves. If it is intended to pasture the corn, it is a good plan to sow rape between the rows at the last cultivation. A combination of rape and corn such as this will fatten hogs fairly satisfactorily, and is a fairly favorable season for the acre of such pasture should carry 10 to 12 hogs at least 30 days. Pigs weighing 100 lbs. and over are best suited for pasturing.  
Any ingenious farmer will be able, in all probability, to devise other means of economizing on the meal ration, and the present suggestions are thrown out as merely representative of steps which may be taken to keep down the cost of production.

## Should We Have a Dairy Council for Canada?

Why Do Producers and Manufacturers Not Get Together to Boost the Industry—By J. N. Dales

WHEN we speak of the dairy industry we have ordinarily meant the production, distribution or manufacture of milk into various foods for the consumption of mankind. Inasmuch as industries grow and prosper only as long as the consumers are to be found, it may be well for those of us who produce, to consider whether we do not need a larger vision of our work and more sympathy with certain interests as we vitally concerned in this national service as we can possibly be.

The dairying business is in a very unsatisfactory condition and the situation is by no means eased by present internal antagonisms. Milk producers and milk dealers frequently quarrel and even when the dispute is settled it is only a German peace. We ought to give thought to the fact that everybody connected with dairying stands upon common ground which all should continue to defend or else the advancement, or even the existence of the industry is threatened.

The milk producers, through their own associations, also the dealers; there are probably certain "business understandings" among those who manufacture milk into the various foods, and there is considerable uniformity in policy and price among the dairy equipment people. Moreover, as our country develops all these interests will certainly be rival camps, and unless business follows white is established the war will go merrily on.

### We Want Team Work.

What we want right now is "team-work." Producer, retailer, food and equipment manufacturers—all together! Perish these foolish rivalries in the hour of national peril. We surely ought to have a higher conception of the duties of Canada's Food Controller than to ask him to settle a local dispute between producer and dealer.

Only by safeguarding every partner's interest in this colossal enterprise can dairying meet the challenge of the nation's need. If we are to be concerned to raise more grain to feed more people to till more land and make more homes and build cities in our great empire of the West, we must have dairying, for after all more than forest, sea or mine it is the backbone of our national wealth.

But the individual farmer can hardly be expected to improve or improve his cows unless it pays him to do so. Here is where the "team work" comes in. Every manufacturer of dairy products or equipment ought to help the producer to spread the word of the value of milk, for his business can only expand with favorable conditions for the producer.

### Educate in Milk Values.

The Canadian people have no conception of the food value of milk, of whole milk, cream-milk, butter-milk, cheese, and similar products. Accordingly, there is an under-consumption of these foods. People cut down the milk supply when prices go up and they do not know that they are still getting bigger value than the same money can procure them

in other supplies. In providing this information both patriotism and expediency demand comrade service from every partner in the business. Let us find common ground. It will mean the good of each and all, and better still, the elevation of a great industry.

We know of no better way than to suggest a Round Table Conference with every auxiliary interest represented. The Food Controller could call such a meeting. The move would give the consuming public a confidence which they sorely need. Prices may go higher yet owing to the scarcity of labor and the export trade. Nothing short of heroic co-operation can save the situation. There is only one way out of the wilderness of suspicion and ignorance. And

at this disastrous job of informing the people not only the man who milks the cows and the one who sells the product, but also the man who sells a stanchion, can just now afford to work overtime.

The writer attended the National Dairy Show at Columbus, Ohio, last October, and verify the relationship of all dairy interests. Four years ago a National Dairy Council was organized. Its members represent every phase of the industry. The big show is not a money-making concern. Every dollar of profit goes into the educating the people in the value of milk as a food. Of course they are succeeding. The people are being taught that they cannot do without it. Their emergency will be met and overcome. Can we afford to lose? We ought to do much, very much more.

## Getting Milk in Winter

Prepare When Cows are Pasture

J. A. Macdonald, P. E. I.

MAN Y of our farmers keeping three or four cows have little or no but-ter for the winter. These cows are usually spring-calving cows that have been giving milk all summer, but are allowed to dry up in the autumn of winter. Usually the in-calf cows "dry up" naturally when they are placed in the stable permanently for the winter and go on dry feed. There are one or two "milzinger" cows that give a little milk during the winter which supplies the household with milk for tea, etc. It has been my experience that cows, even "spring-calvers," will as they give in summer and early fall. Why shouldn't they? But there is one desideratum to the securing of winter milk, namely, that the cows should be milked all summer. Cows on nothing but grass or grass and green cut feed, will naturally dry up when stabled in the beginning of winter, but cows that have been receiving a modicum of meal or grain all summer will not dry up on being stabled.

Governor Hoard once said: "It is not the feed of the cow, the ranchman gets at, but the cumulative effect that makes him win the race, but the cumulative effects of the good feeding for a year or more back." It is the same with the milk cow. It is not the feed she gets this morning or yesterday morning that makes her fill the milk pail, but the cumulative effects of the intensive feeding she has received for months back. In practice it hardly pays to feed a cow meal on grass. That is you do not get enough extra milk from the meal-feeding to pay for it, but a few months afterwards you get results in the ratio of 10 to 1. As much milk now in the latter part of January as they were in August or September, and for this I thank the meal and grain fed during the summer. The best test I have by any means highly fed now, although pouring down the milk so freely. It is the cumulative effects of the all-summer grain feeding.

### EACH CHEESE MADE FROM 100 LBS. MILK

3.3% FAT	3.6% FAT	4.2% FAT	5.3% FAT
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### Shall We Pool Our Milk—Think It Over

AT the recent E. O. D. A. convention at Perth, a striking example was furnished of the comparative merits of milk of different fat contents for making cheese. Through the medium of the laboratory we are passing on this information to our readers. Each of the cheese shown was made from 100 lbs. milk and all were given the same treatment. The experiment was the kindling Dairy School by Mr. L. A. Ziffel, Mr. Cheetham and Mr. G. P. Publow. The 3.3 per cent. milk gave 8 lbs. 10 cwt. cheese per cwt.; the 3.6 per cent. milk gave 9 lbs. 2 cwt. the 4.2 per cent. milk gave 10 lbs. 15 cwt. and the 5.3 per cent. milk gave 13 lbs. 7 cwt. At 21 cents a pound for the cheese, the yield of cheese from the 3.3 per cent. milk was worth \$10.75 as against \$17.75 for the cheese from the 5.3 per cent. milk.

In other words, if the 3.3 per cent. milk was worth \$17.75 per cwt., the 5.3 per cent. cheese would be worth \$27.75 per cwt. The same ratio has been found to hold true with larger quantities of milk in an experiment carried out at the Evergreen Cheese Factory, Stirling, Ont., under the supervision of G. F. Lynn, Dairy Inspector. Two vats of milk were used in this test, the milk testing over 3.3 per cent. was put in one vat, and that testing under this in the other. The following are the results:—

	No. 1	No. 2
Quantity of milk used	6,250 lbs.	4,000 lbs.
Milk test average	3.4 p.c.	3.3
Loss of fat in whey	29	25
Weight of green cheese	5816 lbs.	4220
Lbs. milk to make one pound cheese	10.74 lbs.	11.65
Lbs. cheese from one pound of fat	2.73	2.63
Lbs. cheese from 100 lbs. milk	9.28	8.41
Cheese sold at 21 cents	21	21
	\$196	\$178

It will be seen from these results that a difference of 2 per cent. fat in milk made a difference of 10 cents a cwt. in the amount that the factory was able to pay for the milk. The system of paying for all milk at a common rate regardless of quality is therefore manifestly unfair.

In a survey recently conducted by one of the agricultural colleges in the United States, out of 8,000 cows tested, it was found that 75 per cent. of the milk was under 3 per cent. This is by far too large a percentage of low testers. Nor is any particular breed attributed to the low quality. In a survey conducted at the experiment at Kingston it was found that the milk which tested 4.3 per cent. fat was from a pure-bred Holstein herd, and the milk which tested 3.3 per cent. fat was also from a pure-bred Holstein herd.

# Making the Most of the Labor at Hand

"Let Dobbin Do it," Says J. H. Grisdale, Director Dominion Experimental Farms

It is with a certain amount of hesitation that I bring before the farmers of Canada the need of the Canadian production of foodstuffs during 1918. "Hot under the collar" and rightly so at the efforts put forth, especially by city people, to coerce us to greater production. We are, however, faced with the greatest risk that has faced us since the early days of the war—the risk that the allies may not

cannot build the fences during the winter, but you can haul your posts and secure wire.

Third: All seed grain should be prepared and cleaned during the slack season. The supply of corn, clover and timothy, should be ordered now. This practice applies to every variety of seed this year. Turnip and mangel seed will be very scarce. These seeds will not be any cheaper in the spring year. They will probably become more and more expensive. Oats should be treated for smut, either with bluestone or formalin. Many thousands of dollars are lost annually in Ontario through this cause.



A Grand Individual and a Well-known R. O. M. Cow.

Queen Butter Barnes, owned by M. H. Haley, Oxford Co., Ont., was second in the mature class at Guelph last December. She was second in the cent. fat in the three days of the test. As a three-year-old she produced 40 lbs. of butter and as a mature cow 33.17 lbs. butter in 7 days, both Canadian records when made. As a two-year-old she was first in her class at Guelph and her daughter won the dairy test as sweepstakes cow two years ago.

be able to hold out because of the shortage of food. The food situation in Europe is more serious than we in Canada can well appreciate. We are told by the Food Controller's department that not only will the world be on rations if the war lasts eight months longer, but that even were peace to be declared now, we would not be out of the danger of famine until after the 1920 crop is harvested.

In the light of these facts, we should expend every effort in the great task of feeding the allies who are fighting for us. Greater production cannot be attained by asking the farmer to work longer hours. He is at present doing his utmost. The high prices being paid now for farm products would ensure this even outside of patriotic motives. And in an effort for increased production, there are only two methods to which we can turn. Either we must increase the area under crop, a thing which is practically impossible during 1918, in view of the labor scarcity, or else we must make the acres that are under cultivation produce bigger yields. Both of these methods require labor, but the latter would seem to offer the best solution for the difficulty.

The first essential in preparing for maximum crops next season is the planting of the farm work. During the winter a complete plan should be worked out, and if necessary put on paper for the work next season. It may not be possible to follow out the plan in every detail, but it will be something to go by. You will find you can get more done in that way than by depending upon haphazard methods. You should know what you are going to put in each field, so that no time will be lost waiting for any particular field to dry up when work might be carried on in another part of the farm.

### Haul Manure in Winter.

The second method by which time may be saved next spring (and every hour that can be saved in the busy season is like having an extra man for one hour), is in better preparation during the winter. From now to the middle of April everything should be done that can be done to relieve the rush. To enumerate a few of these. First, haul out the manure during the winter and spread it. This practice should be followed until the snow gets too deep. It will be well to use stakes in this work so that if a snowfall hides the manure already spread you will know where you left off. This method of treating the manure conserves all the fertility. The manure freezes and remains in place until spring. If the snow becomes too deep to admit of spreading piles about the barns, do not allow it to accumulate in big small piles. Manure should not be put on the land at more than 15 to 18 tons per acre. It is better to treat more land with a lighter coating. By doing this hauling in the winter, you should not have more than 10 days' manure in the yard when the spring work commences.

Second: Get fencing material ready now. You

Fourth: Get harness in shape for spring work and have plenty of spare straps and buckles on hand. This applies also to all the farm implements. They should be put in shape now and the wooden parts painted. Plow points and various hitch bolts should be had in now. A lot of time can be saved in bringing a plow point on the machinery shed instead of from town next spring.

Fifth: Put the horses in shape for spring work. Horses may be worked. Ten days before the spring work commences, however, they should be gradually brought up to moderate feeding and moderate work. By spring work well.

The most important feature of the farm practice at hand. This does not mean working horsepower to fit condition so possible to keep the men in the job. The horses should be kept in shape during the busy season. The same should apply to the farmer slogan would be "Never walk when you can ride." Use a two furrow plow with a seat on it. Get a cart for use with the drag harrow and have a step fixed on the back of the seeder where you can sit. You will be able to do just as good work and you will feel fit for doing the chores in the evening and for tackling the work again next day.

Larger machines is the solution of the labor problem. More work will be done in a day with the limiting factor in the man-power that is production these years. Too many are satisfied to go on with the one-furrow plow, the three-section harrow, and a little dinky disc. The small machine costs more per acre than the large one. This has been proved by experiments carried on throughout Canada. At Ottawa it was found that plowing one acre with a one-furrow plow, and two horses cost \$22 per acre. With the same man using a two-furrow plow and three horses the cost was but \$12 per acre, and he rode while he was plowing.

In experiments carried on with different discs in which a 12-disc machine with 12 inches in diameter, a 17-disc machine with discs 16 inches in diameter and a double action cutaway disc were compared, it was found that it took the little disc three times over, the big disc twice, and the cutaway but once to put the land in good shape. Ten

acres was the basis upon which this experiment was carried out, and the cost per acre with the little disc was 90 cents, the big disc 80 cents and the cutaway a double one. So if you are getting a disc this year, get your neighbors a disc that throws the soil the opposite way from yours. Remove the pole from one short pole. Use hitch it behind the other with a double disc cooperatively, both you and your neighbor will benefit. If you can get your discs fastened to each other rigidly you may work without a tongue.

### Have a Seat.

In drag harrows it has been found that using two horses on a four-section harrow costs 17 cents per acre to cover the ground. With a three-horse outfit cost is an acre. Hitch a cart behind your drag harrow. For seeding we use at the experimental farm at Ottawa a big 20-marker seeder. The cost of planting was 23 1/2 cents per acre, with a 20-marker seeder the cost is reduced to 18 cents per acre. By riding you not only save yourself, but you speed up the horses. In many cases the horse's natural gait is a little then back slightly. This is more tiring to the horses than if they are allowed to take their natural gait.

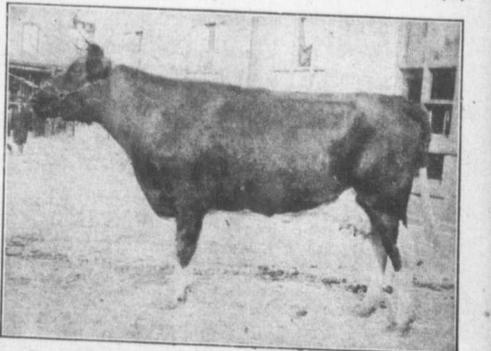
In planting corn the work with a hand-planter cost 64 cents an acre. With a seeder the cost was 20 cents an acre. It is on the corn crop the cost here low crop, whatever it may be that the manure should always be put.

The same saving by the use of wide machinery follows right through the harvesting operations. For instance, with a four and one-half mower the cost of cutting hay is 31 cents an acre; with a six-foot mow the cost is 41 cents and with a seven-foot haying. With a seven-foot mower you get your hay cut when you want it.

The fourth essential in achieving the maximum production is "prompt action." Don't wait around for the proper phase of the moon in springtime, but get on the land the moment the field is ready. Last year at our experimental farm at St. Anne de la Poutriere we had a good object lesson in this regard. After the land had dried up sufficiently for sowing wheat the weather took a change and several weeks of rain followed. Our foreman said that because he started to sow his wheat. It got more and more like rain and he stayed out working by the aid of lanterns until nine o'clock that night when the field was finished. He reaped 43 bushels of good quality wheat that was the only field of wheat that amounted to anything in that section of the province last year.

### With the Live Stock.

Time may also be saved in the work of the live stock through the introduction of machinery. A litter carrier installed in a barn will help considerably. It will also feed trucks. Calves and other animals can be run loose, should be grouped to save you time to get a milker. We have nice different mechanical milkers at Ottawa and none have proved themselves to be bad. Some are very good. A milker makes a dairy farmer more independent of labor conditions. We have 100 cows being milked by these machines and no cow has shown the slightest injury.



A Good Young Cow With a Future Before Her.

Duchess of Norfolk was first at Guelph in the three-year-old class, 195.7 lb. milk and 2.55 per cent. fat for three days. This cow will develop more under capacity, a greater udder and will be a show cow of merit. Owned by A. E. Hulet, Oxford Co., Ont.

## Your Responsibility

**T**HE feeling of responsibility which the true officer has for the lives of his soldiers grows in intensity as he gets to know and love his men, and deserves their devotion in return.

Every true man protects his wife and children even though the offense be only an injurious word. His feeling of responsibility for his loved ones grows with the years.

Too often he realizes when it is too late that he desires his responsibility for their care to continue after he has passed away.

Wealth may come and go. The most certain way to discharge your responsibility is by means of Life Insurance.

Nearly fifty thousand Canadian homes are protected by means of Mutual Policies.

The terms of Mutual Policies are liberal and include every modern feature.

Write for folder entitled, "Fifty Fundamental Facts."

## The Mutual Life Assurance Company of Canada Waterloo, Ontario

### SEED OATS FOR SALE

Pure and clean, grown from selected and graded seed, hand weeded while growing.

O. A. C. 72, IMPROVED AMERICAN BANNER, and O. A. C. No. 3—three of the best and most popular varieties ever grown in Canada. All heavy yielders of first class quality. Samples, prices, and further particulars, on application to the growers.

MARKHAM A. & W. D. FORSTER ONTARIO

## Ontario Corn and Grain Exhibition

ARMOURIES, CHATHAM  
February 12-15, 1918

\$2,000.00 Offered in Cash Prizes.

Ask Your Agent About Railway Rates

ASSOCIATION MEET NGS

Wednesday—Dr. G. C. Creelman; Mr. C. A. Gearhart, Ohio Experimental Station, and Mr. H. G. Bell, Chicago.

Thursday—Dr. C. A. Zavitz, O.A.C., and Mr. J. H. Gisdale, Ottawa.

Friday—Prof. J. T. Cox, Lansing, Mich.; Mr. A. Leitch, O.A.C.; and Mr. F. C. Hart, Toronto.

L. L. GREGORY, Pres., P. L. FANCHER, Sec., Chatham, Chatham.

DEAL WITH  
Farm & Dairy's Advertisers

### Hog Production in Ontario

**T**HE hog campaign in Ontario is steadily progressing according to reports of the district representatives. One of the big difficulties confronting farmers who would increase the number of brood sows is the fact that corn and other feeds that have to be purchased are not only very high in price but are difficult to procure in lots sufficiently large to ensure future supplies. Among the more encouraging reports received from representatives are the following:

Midlesex—"So far 800 extra sows are reported."

Waterloo—"We have the promise of 619 extra sows in this county for the coming year."

Dundas—"570 farms were visited during December and on these were promised an increase of 575 sows."

Lincoln—"This county promises to produce over 550 tons extra pork in 1918."

## Field Notes

By G. C. McKillican, Field Representative, Farm and Dairy.

**I**T was my privilege recently to call at the farm of one of Western Ontario's progressive farmers, Mr. Anthony Gies. While there I could not but notice the absence of that air of "unhappiness" seen on so many farms, principally caused by the farm machinery being scattered about the yards. Mr. Gies has a machine shed, large enough to accommodate all his machinery. It is covered with corrugated iron, and is thus fire-proof. In the years of expensive machinery, or at any time in fact, such a shed would be a very profitable addition to any farm equipment.

**T**HERE were few farms in Ontario this year where things were in proper shape for the approach of winter. In no respect have I noticed this condition more than with regard to the fuel supply. City dwellers seem to think that they have a monopoly on fuel shortages, but such is not the case. Even among farmers who have their own woods to draw on for fuel, I noticed very few who have more than a few weeks' supply in shape for use. Last winter, owing to the snow and shortage of help, very little wood was gotten out. Farmers used up their supply on hand, and during the summer burned old fences, rubbish, etc. This year help is even more scarce than last winter started in early and severely, and farmers as a rule are picking up their fuel when and where they can get it.

Not only in regard to fuel are farmers depressed for winter but in other ways as well. During the past weeks I have been at many places where broken windows, panes, doors and other damage, which had occurred during the summer months, had not been repaired.

**W**HEN calling upon one of the more extensive farmers in Oxford county I found him engaged in thawing out his barn water system. While he was at the Winter Fair at Gies's here bull, in resentment to the idea of the bird man taking a holiday, instead of attending to the stock, had broken a large hole in the wall of the stable. Through this opening the 50-lb. gals which served Ontario in a rather good ready access, with the result just mentioned.

**W**HILE in the barn of Mr. Anthony Gies, of Waterloo, before mentioned, I was attracted by a gate which he has arranged to prevent the cows from getting into the feed passage while being driven

into their stalls. The gate, which is a light one, hangs from two rods which are fastened at the upper end to rollers. These rollers travel on a length of carrier track, and the gate very easily rolls along the track to shut or open the feed passage.

Another contrivance which Mr. Gies has installed is a covered trough in the stable connected with a chute, down which he puts chaff for bedding. The cover prevents dust from blowing all over the stable. When he wishes to cover chaff for bedding, he lifts back the cover, which is hinged, and can take what he wants without raising too much dust.

**W**HILE recently visiting Mr. T. W. McQueen, of Springfield, I was attracted by a concrete watering trough. This was set in the middle of the yard and was round. It was 12 feet in diameter and about 30 inches deep. Mr. McQueen has two large concrete silos, and he used the silo moulds as forms to make the trough.

### An Acre Profit Competition

**T**HE results of the Acre Profit Competition for 1917 are now available. The Ontario Department of Agriculture, through its district representatives, conducted 32 competitions during the year. These are open to farmers who have taken the Four Weeks' Courses in Agriculture conducted by the district representatives, and the prize is a two weeks' stay at a resort at the O.A.C. Where eight or more contestants finished in a competition, two men are named sent to Guelph. In estimating the cost of operation, \$5 per acre was allowed for the rest of the land, \$2 for plowing, 15 cts. per hour for manual and 10 cts. per hour for horse labor. In the first cross the competition was conducted on the five-acre basis. The following is a list of the winners, giving some interesting figures as to cost of production and profits in various crops:

Competitors in Oats.  
The men of the six highest winners with oats were: Arthur G. Tudhope, Hawkestone, Simcoe county, came highest, his yield being 50 bushels, cost of production, \$178, and net profit, \$26.22; Russell A. Templar, Burford, Front county, 72 bush., cost of production, \$157.18, profit, \$32.19; Chas. Stone, 67 bush., Guelph, Kenton, cost of production, \$178, and net profit, \$24.70; Ed. Mott, Guelph, Wellington county, 61 bush., cost, \$148.38, profit, \$25.27; Geo. Timmerling, Inverness, Dundas county, 62 bush., 12 lbs., cost, \$152.31, profit, \$25.25; J. W. Wood, York county, 54 bush., cost, \$145.53, profit, \$26.24.

Potatoes (90 cts. per bush.).  
The six highest winners with potatoes were as follows: Port Hoodson, Midleton, Manitoulin, 463 bush., cost of production, \$130.40, profit, \$28.60; Valentine Hites, Slate River, Fort William, 376 bush., cost, \$72.30, profit, \$25.14; G. Gordon, 311.75 lbs., Muskoka, 364 bush., cost, \$83.05, profit, \$24.55; Robt. Denton, Slate River, Fort William, 364 bush., cost, \$58.15, profit, \$215.14; Wm. T. Price, Guelph, Port Arthur, 327 bush., cost, \$82.20, profit, \$21.21; Arnold Goodin, Seneceville, Grey county, 321 bush., cost, \$82.90, profit, \$20.6.

Green for Seed (\$1.75 per bush.).  
Glenora MacDonnell, Port Lambton county, 26 bush., cost of production, \$21.67, profit, \$24.40.

Turnip (45 cts. per bush.).  
John Edgar, Paris, Front county, 867 bush., cost, \$127.11; Jas. Beaton, Hamilton, Wentworth county, 560 bush., cost, \$21.80, profit, \$62.20.

Mangel (15 cts. per bush.).  
Clarence R. Lovelink, Newcastle, DeWinton county, 550 bush., cost, \$13.10; profit, \$178.25; Jas. G. Armstrong, Formosa, Bruce county, 521 bush., cost, \$25.57, profit, \$64.68.

Wheat (\$2.15 per bush.).  
John D. MacLaren, Arnprior, Res.

few county, 34 bush, cost, \$18.20, profit, \$54.30.

**Hog-Feeding Competition.**

The six highest winners in the feeding hogs for profit competition were: Walter Galbraith, Spring Bay, Manitoba, average cost, \$36.05, average profit, \$28.56; J. J. Hutchison, Dryden, Kenora, cost, \$18.54, value, \$42, profit, \$25.44; Rolane E. Maeder, Ayr, Waterloo county, cost, \$15.87, value, \$40.42, profit, \$24.55; Harry L. Kaufman, Bright, Oxford county, cost, \$17.12, value, \$39.81, profit, \$22.69; William K. Whitley, Senecerville, Greenville county, cost, \$13.66, value, \$36.10, profit, \$22.44; Orval Daley, North Gower, Carleton county, cost, \$9.47, value, \$30.98, profit, \$21.51.

**Milled Retail Prices Fixed**

THE Office of the Food Controller, Ottawa, has issued the following statement: "In order to prevent retail dealers taking advantage of the scarcity of bran and shorts to exact excessive profits over the prices fixed by the Food Controller, the latter has ordered that the retail price of bran and shorts, when cash is paid, must not exceed by more than 10c per bag the cost f.o.b. track at the dealer's station. In cases where purchasers take delivery direct from the car the profit has been limited to a maximum of 5c per bag. An extra charge may be made where credit is given and the bran and shorts delivered from the dealer's store, but the amount must be only a reasonable charge, representing the consideration of such ser-

vice. When the miller sells at the mill in less than carload lots he is not permitted to add more than 5c per bag of 100 pounds to the price at which he is permitted to sell under the Food Controller's order of December 17, 1917.

"When the purchaser brings bags to the mill to be filled the miller must not add more than \$2 per ton to the price at which he is permitted to sell under the order of December 17, 1917. In effect, the miller must not charge more than the fixed Port William bulk prices, plus or minus freight to or from Port William, and in addition \$2 per ton in retail charges. For example, suppose that a point in eastern Canada the freight from Port William is \$4.20 per ton. In this case the selling price for bran per ton, when the purchaser supplies the bags would be \$24.50, plus \$4.20, plus \$2, a total of \$30.70. The order applies to all millers and dealers in Canada.

"While this action has been taken in order to render available to the farmer all supplies of bran and shorts at the lowest possible cost, the amount obtainable is very limited, and farmers must depend mainly upon other feeding stuffs.

"Providing Feed for Live Stock.

"The Food Controller has taken measures to reserve for the farmers of the Dominion all by-products of grain elevators that are available for stock feed and also feed wheat, bran and shorts and all such mill feeds. Applications for licenses to export 6,640 tons of bran, shorts and mill feeds have been refused. Instead the saving has been very much greater because

**Horse and the Tractor**

FALSE and misleading statements by lecturers, machinery salesmen, and sometimes by representatives of one or another of our governments are often used in comparing the horse with the tractor. Here is a recent sample taken from a letter written by the agent of a tractor firm established in Canada: "A horse is the poorest motor ever built. He eats 200 pounds of feed per year; he eats the whole output of five acres, yet his efficiency is only two per cent. He must be taken care of 105 days of every year, yet he averages only 34 hours work per day and tires in 12. To take care of him, you or your man must spend 27 minutes every day. Land and labor are both too expensive." This argument may appeal to some poor farmer who may possibly be half persuaded by the talking ability of the local agent. Not a word is said of denaturation, cost of fuel, loss of manure and no colts, cost of repairs, delays in getting them, need to employ mechanics, or go through the costly ordeal of experimenting your-



**This Hen Is Helping**

She's trying to fill the nation's demand for food—and more FOOD. You can help her produce more with

**Pratts Poultry Regulator**

—the natural vegetable tonic and conditioner. Acts directly upon the digestive and egg-producing organs. Keeps the fowls healthy and vigorous. Prevents disease. Insures steady laying, more fertile eggs and sturdier chicks. Try it at our expense.

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The Pratt dealer in your vicinity has "Pratts" in popular-proof bags, also in money-saving 25-lb. pails and 100-lb. bags.

Write now for Pratts FREE book, "Poultry Writings," 64 pages of reliable hints on Poultry Raising.

**PRATT FOOD CO. OF CANADA, Limited.**

638M Clarendon St., Toronto.

**Why Food Prices are High**

By the late Food Controller Hanna.

IT is important that the people should understand the fundamental causes of present high prices of food commodities. The world demand for food has suddenly undergone a tremendous increase. The world supply which at that portion of the world supply which is accessible and available to stand this sudden demand has been exhausted and greatly curtailed production. Surplus stocks have been normal consumption requirements. Under peace conditions, when the demand and supply is disturbed, the price of food commodities rises and stimulates production, or a fall in prices encourages consumption while restricting production. But during war time, such readjustment is difficult, and the production agencies are limited, and even under the spur of unusual relief can be obtained, must result in an increasingly acute shortage and lead, eventually, to famine.

self. The loss in market value of present assets is very important factor. The farmer who depends upon his own industry and land to run his farm, and keeps away from the markets as much as possible, is playing the safest possible game. When he lets this position go, and has to buy his fuel, depend upon others for repairs, and be continually on the market, both buying and selling, he is carrying a much larger load than necessary.

We need not fear these tractor arguments very much. What should concern us is the fact that at times our government officials are used, in the sale of articles, the true value of which is not realized until too late. We have tried again and again to show them how this is working. We have demanded that they respect the interests of the farmers, pointing out that cloaked, partially on their part the assets of the farmer. We have hundreds of millions of dollars invested in horsefeed in this country, and this should be respected just as manufacturers and others who would like to have the horses who would like to business.—W. H. Wilson, Secy Can. Percheron Breeders' Association.

A Yankee clinched his argument with an Englishman as to the relative size of the Thames and Mississippi by saying: "Why, look here, mister, there ain't enough water in the whole of the Thames to fill a marble for the month of the Mississippi!"

**130-Egg Incubator and Brooder for \$15.75**

If ordered together we send both machines for only \$15.75 and we pay all freight and duty charges to any R. R. station in Canada. Orders shipped from nearest warehouse to your R. R. station. Hot water, double walls, double space floor, copper tanks and boilers, self-regulating. Nesting and brooder trays, large, lunge, egg trays—ready to use when you get them. All year guaranteed—30 days trial. Satisfaction or we take back your money. Machines with others, we feature of your order. Don't buy until you see our Brooder and covers freight and duty charge. Write for FREE color and new time.

**WISCONSIN INCUBATOR CO., Box 232, Racine, Wis., U. S. A.**

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Gilson Engines have long enjoyed an indisputable reputation for dependability, power, simplicity and economy. This year finds us with an even more attractive proposition for the discriminating buyer. Prices of every day we are able to furnish Gilson Engines at even lower prices. Write to-day for catalogue, price, and easy payment plan, stating what size you are interested in.

**GILSON MFG. CO., LIMITED, 257 York St., Guelph, Ont.**

**SELL YOUR POULTRY**

Farm and Dairy, Peterboro, Ont. Bayside, Ont., Dec. 26.

Dear Sirs:—I certainly pay to advertise. My pullets are all sold, and I could have sold a hundred if I had them for an aim getting replies to my ad. every mail.

Yours truly, Mrs. Wm. Hadrell.

Perhaps you, Mr. Reader, have some also who wish to sell their eggs for hatching, baby chicks, or duck, goose or turkey eggs—no matter how many. We can find buyers for them in our

**POULTRY NUMBER OF FEBRUARY 7th, 1918**

Write out a small advertisement and send it to-night. You will be surprised at both the small cost and the large results.

**Advertising Department**

**FARM AND DAIRY Peterboro, Ont.**

Farm and Dairy stands foursquare against everything that is detrimental to the farmers' interests, and whatever appears in its columns, either advertising or editorial, is guaranteed reliable.





On Hogs

A MOST worthy campaign has been launched (not lunched) by the Food Controller...

Apart altogether from the economic importance of "hogs vs. Huns" the campaign is a commendable one because of its moral aspect.

I have never found it difficult to keep up an interest in pigs. When they are young they are such sturdy little chaps...

A few years ago one of our sows had a litter of 14 pigs, and cute—you should have seen them.

Let cullivers deny That brutes have reason; sure 'tis something more, 'Tis heaven directs, and stragons inspires

You never saw a happler family than these 14 youngsters. They didn't have to be coddled and rocked to sleep.

But let us remember the words of that noted student of economics, Stephen Leacock, when he said: "If we raise enough food the Germans will starve to death."

I am raising a pig for the war. But like all other things that go to keep the Jack Johnson's flying...

Sam Ray



Complete Service to Ford Owners Everywhere

COURTEOUS attention to your needs wherever you may travel is something you appreciate, and being a Ford owner you can get it.

There are more than 700 Ford Dealer Service Stations throughout Canada. These are always within easy reach of Ford owners...

The cost of Ford Service is as remarkably low as the cost of the car itself. Nineteen of the most called for parts cost only \$5.40.



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Runabout - \$475
Coupe - \$770
Sedan - \$970
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Chicago Office—People's Gas Building,  
New York Office—Tribune Building.

### CIRCULATION STATEMENT.

The paid subscriptions to Farm and Dairy approximate 20,000. The actual circulation of each issue, including copies of the paper sent to subscribers, who are but slightly in arrears, and sample copies, varies from 20,000 to 22,000 copies. No subscriptions are accepted at less than the full subscription rates.

Sworn detailed statements of circulation of the paper showing its distribution by counties and provinces, will be mailed free on request.

### OUR GUARANTEE.

We guarantee to our advertiser in this issue is reliable. We are able to do this because the advertising columns of Farm and Dairy are as carefully edited as the reading columns. We endeavor to protect our readers, we turn away all unscrupulous advertisers. Should any advertiser herein wish to dishonestly use you as one of our paid-in-advance subscribers, we will make good the amount of your loss, provided your transaction occurs within one month of date of this issue, that it is reported to us within a week of its occurrence, and that we find the facts as stated. It is a condition of this contract that in writing to advertisers you state: "I saw your advertisement in Farm and Dairy."

Advertises shall not ply their trade at the expense of our subscribers, who are our friends, through the medium of these columns; but we shall not attempt to adjust trifling disputes between subscribers and honorable business men who advertise, nor pay the debts of honest bankrupts.

## The Rural Publishing Company, Ltd.

PETERBORO AND TORONTO

"Read not to contradict and to confute, nor to believe or take for granted, but to weigh and consider."—Bacon.

### The Basis of Profit

WE have stated it before, but let us state it again: The basis of profitable feeding is an ample supply of home grown roughage. Replacing legume hay in a cow's ration with an extra supply of concentrates always was an uneconomical practice and this year it cannot be other than a losing practice. Good clover and alfalfa hay, even if they have to be purchased for \$15 or \$20 a ton, afford the cheapest source of animal nutrients this winter. Corn ensilage is a good second. It may cost a little more to grow the corn crop than in other years, but the increased cost of the corn in the silo will be but a fraction of the increase in the cost of concentrated feeds. The most profitable milk and butter fat being produced this winter is that produced in stables where cows are getting abundant corn ensilage, all the legume hay they will eat and then a little grain for the best milkers, say one pound of grain to each three and one-half or four pounds of milk. Cows producing 15 to 20 lbs. of milk or less, fed on good roughage, will not require grain at all. An exception may perhaps be made in the case of feeders who can get the full advantage of the city milk market. Such farmers can afford to feed concentrates a little heavier than those who are shipping sour cream or making butter at home.

The great lesson to be derived from this season's feeding experience is plain: The crops on which we should concentrate next year are the clovers and corn. True an extra acreage of red clover can be provided only for 1919. The clover seeded last spring went into the winter in good condition and with a fair season should yield well this year. Alfalfa seeded without a nurse crop on clean ground early in the spring will frequently yield a good crop the first summer and this practice of seeding might be followed by those who have not otherwise provided themselves with clover for next year.

Lots of roughage and good roughage has always been a good rule of practice on the dairy farm. It is a better rule now than it ever was before.

### The Demand for Wool

THE world is now facing a wool famine—2,600,000,000 lbs. of the 2,800,000,000 lbs. grown in the whole world in 1916 were used by the armies alone; 56,000,000 sheep have been slaughtered in Europe since the war began. The United States, in addition to fulfilling its entire wool clip last year, found it necessary to import 535,000,000 additional pounds, and it is expected their wool clip in 1918 will be less than it was in 1916 or 1917. The Australian wool clip is available in about the usual quantities, but to secure shipping space for Australian wool is almost impossible.

With such a world-wide shortage of wool, the great problem is not the control of wool prices but the stimulation of wool production. Production can be stimulated only by high prices for the product. Breeding stock is now selling at record prices, and farmers are not apt to be enthusiastic over the heavy investment that a start in sheep rearing involves unless wool prices are such as to practically guarantee a profit on the venture. Under these conditions the imposition of a wool embargo, as now demanded by the textile manufacturers, would be unwise. The object of such an embargo would be the corraling of the Canadian clip and the reducing of its price to the manufacturer. Its inevitable result would be to reduce the production of a commodity most necessary at the present time. From the standpoint of national need the government should turn a deaf ear to the representatives of the textile industry now at Ottawa.

### Supply and Demand

PROF. WARREN, of Cornell University, is not in favor of price control. He is quoted in a recent issue of Hoard's Dairyman as saying:

"We need to prevent all waste of food, to mend our old clothes, wear patched shoes, and reduce the manufacture and use of all luxuries if our allies are to be fed and clothed. We must, if possible, maintain or increase food production. Nothing will so readily accomplish all these things as good prices, and nothing will make it so difficult to accomplish any one of them as low prices. The solution of the food problem is more food; not less price."

Prof. Warren assumes that measures of price control will be designed primarily to make goods cheap. He is right, particularly when that control has to do with food products. The demand for fixing prices on food products almost invariably comes from the towns and cities. Consumers remember that in the past cheapness and abundance have always gone together. They believe, therefore, that if goods can be made cheap they will also be made abundant. It is hard for them to realize that high prices are due to an actual scarcity of food products. And, if we may judge further from the past, if food were to be made artificially cheap it would be wastefully used, and our world's limited supply would not go so far as it promises to do at the present rate of consumption. High prices afford the most effective method of forcing economy. At the same time they are the greatest stimulant to increased production. Our legislators, and particularly our Food Controller, will do well to carefully consider this basic economic law when price fixing is under consideration.

### Another Production Scheme

AN Eastern Ontario lawyer, during the election campaign and since, has been vigorously urging on the Government and people a scheme of his own to increase agricultural production. In brief, this scheme, which has already been editorially endorsed by one of our leading dailies, is that the Government acquire 100,000 acres of virgin prairie and buy a sufficient supply of tractors, plows, harrows and seeders to put the land into oats next spring. This 100,000 acres of oats would indirectly increase the supply of wheat available for export and our lawyer friend believes that the scheme could be carried through with profit to the Government. Almost any scheme that promises an increased

food supply is worthy of our consideration. We doubt, however, if the scheme of our lawyer friend, will bear more investigation than the multitude of schemes that have been advanced during the last couple of years and discarded as impractical. In the first place, why break up the raw prairie, which if spring plowed would not give more than a small crop of oats the first year and could not be made to yield wheat at all until the second year, when there are thousands of acres of land already under cultivation that will lie idle next year because of lack of the very labor that this scheme would call for in abundance. These otherwise idle acres can be gotten into condition for spring crop with much less labor and expense than the raw prairie, which is not in best cropping condition until the third year after breaking. Even if labor could be found for such a scheme as the one proposed, it would be much better to make the same labor available to individual farmers who would gladly cultivate much more land if they had the help.

Tractor power is scheduled to play an important part in operations next spring. A simple Order-in-Council rescinding the duty on imported tractors would result in enough tractors being purchased in Eastern and Western Canada to work several hundred thousand acres of land, and that without the investment of one dollar of Government money. With the customs duty out of the way, farmers could afford to buy their own tractors and with the need for production as great as it is, the withdrawal of the duty against tractors is the logical action for the Government to take. We fear, however, that rather than sacrifice the "protective principle" so dear to his heart, our finance minister might be willing to undertake the unknown difficulties of managing a 100,000 acre Government farm.

### Universal Military Training

IT is desirable that universal military training become a part of our Canadian national life. In the past few weeks several letters have appeared in the city press suggesting that immediate legislative action be taken to provide for compulsory training in Canada. The writers, most of whom are well known, remind us of the unpreparedness in which the outbreak of this war found us and urge that we take all possible precautions, to guard against the recurrence of such unpreparedness. They remind us that it was universal military training which gave Prussia her power and, in this case, plead that we learn from the enemy.

Such suggestions are particularly unfortunate at the present time. Our justification for continuing in the war is that we are waging a great fight for humanity and democracy. War is never humans in its practices. From the democratic standpoint it has ever been the tool with which autocrats and despots of all countries have endeavored to suppress the growth of human liberty. Our supreme justification in this war, therefore, is that we are waging war to end war. To even suggest that compulsory military training be one of war's necessary aftermaths is to proclaim to the world that the end of this war will find us busily preparing for another war in the future. Military training in any country is a silent threat against all other countries whose interests differ in the least from our own and would be so interpreted in all foreign capitals.

Military training may have its redeeming features, such, for instance, as improving the physique of the country's manhood. Few who have studied its effects in European countries, where compulsory training has been long in vogue, would care to claim that it improves a man morally, mentally or spiritually. In fact the consensus of opinion is that military training is at the root of many of the social evils of continental Europe. But this is not the time for a discussion of the merits or demerits of universal military training. It is the expressed design of the allied peoples to end war once and for all. Any suggestion of after the war military training will give rise to doubts as to our sincerity. Do the members of the small group of ardent Canadian militarists realize how far reaching and regrettable may be the result of their ill-tempered propaganda?

## Saskatchewan Dairymen Meet in Convention

Cream Should be Pasteurized to 160 Degrees. Saskatchewan Butter Will Compete With Alberta and Manitoba Butter at Winnipeg

THE annual convention of the Saskatchewan Dairymen's Association, held at Saskatoon, January 15 and 16th, was well attended. Mr. L. C. Wirth, retiring president, reviewed the difficulties that confronted the dairymen during the past year, and pointed out the tendency of many farmers to give their entire attention to grain growing.

The Hon. Mr. Matherwell, Minister of Agriculture, reviewed the growth of dairying in Saskatchewan during the past twelve years and compared the favorable conditions to-day with those which existed in 1905. He spoke on the food problems confronting Great Britain and her allies and outlined the duties of the dairymen of Saskatchewan in the production of dairy and pork products, pointing out that every dairymen had an important part to play if our fighting forces are to be maintained and victory for the allies achieved.

Mr. Matherwell referred to the legislation which has been recently passed affecting the dairy industry. He predicted that cancelling the Herd Law in the northern part of the province would result in greatly stimulating the production of dairy products in that locality. It would enable dairymen in that part of the province not only to keep more cows, but it would provide much better feed for herds already in existence and beneficially affect production of dairy products in Saskatchewan.

Mr. F. H. Auld, Deputy Minister of Agriculture, addressed the convention on the world's requirements in regard to bacon and dairy products. He referred to conditions in Europe which had so materially affected production, and urged the farmers in Saskatchewan to do their part in supplying the world's needs and especially those of the allied armies.

He spoke of the changes which had occurred in the Dairy Branch during the past year and mentioned that Mr. W. A. Wilson, who for the past twelve years had occupied the position of Dairy Commissioner, had retired to assume the management of the Saskatchewan Dairymen's Association Ltd., and that Mr. P. M. Loran, Assistant Dairy Commissioner, had been appointed in his place. The formation of the new company will relieve the Dairy Branch of the operation of the cooperative creameries which it has carried on for a number of years. The Dairy Branch will, however, continue to grade the butter, carry on the educational work and aid in developing the industry in every way possible.

Mr. W. A. Wilson, who had been called to Winnipeg by the Food Controller to investigate the milk situation in that city, forwarded an interesting paper on "Cold Storage and Food Conservation," which was read at the Convention.

Mr. P. M. Loran, the new Dairy Commissioner, gave an address reviewing the work of the Dairy Branch for the past year, and outlining some of the requirements for the future. He referred to the results which have been obtained by the careful grading of cream in improving the quality of Saskatchewan butter. This has resulted in the production of a uniform article of good quality, which has gained for Saskatchewan an enviable reputation in the butter markets of Canada. Most of the export butter has been marketed in Vancouver and Victoria, where its reputation is well known, but during the past year a few cars have been sent to Toronto and Montreal markets, and were most favorably commented upon by dealers in those cities.

A carload was sent to Montreal in March of last year, and the firm handling same reported that they

were able to dispose of it at an advance of from 1c to 2c above local butter prices. This was possible on account of the excellent uniform quality. Toronto dealers paid even higher compliments, and numerous requests have come from these cities for additional shipments. The Coast dealers are requesting that the butter, so far as possible, be pasteurized. Saskatchewan dairymen must install pasteurizing equipments if they wish to retain the favorable position they now hold in regard to creamery butter.

In spite of a difficult year for dairymen, on account of shortage of labor, the high cost of feed, a late spring and an early fall, the output of creamery butter was approximately 4,482,000 lbs., which was nearly equal to that of the previous year. While the farmers have not produced any more cream or milk, they have received over a quarter of a million dollars more than they did during the previous year.

One of the most interesting features of the convention was a competition among the creameries of the province, the prizes being given by the De Laval Dairy Supply Co. of Winnipeg. This provided that a 14-lb. box of butter should be sent in to cold storage each month, during the six summer months, and held in cold storage. Only a large percentage of the farmers in the province started in this contest but several of them dropped out before they had completed their entries. The task of judging these entries was given over to Mr. W. W. Moore, of Vancouver, and to Dairy Commissioner Markler, Calgary, and needless to say their decisions were satisfactory to the exhibitors. The winners were awarded on the highest average as follows:

1. Cooperative Creamery, Moosemin, 94.8; do. Borden, 94.7; do. Melville, 94.6; do. Tisdellton, 94.5; do. Wainwright, 94.3; do. Shellbrook, 94.2; do. Orkney, 93.5; do. Wadena, 93.2; do. Regina, 93.0.

In the nine winning lots of butter there was less than 2 per cent. difference in the average scores, which showed exceptional uniformity.

The buyer obtaining the three best prizes will be selected to Winnipeg to compete in an inter-provincial contest, which has also been arranged by the De Laval Dairy Supply Company. This will include sixteen samples from Alberta and Saskatchewan and the same number from Manitoba. So the final results will be looked for with the keenest interest. A contest of opportunity for producing an excellent article of the butter made in each province, and is also a good test of the creamery's ability to produce a uniform article.

Another interesting competition was a contest between creameries in including 15 samples of butter of various qualities. The different scores showed that the opinions differ even among butter-makers in regard to the desirable qualities of butter. The winners were as follows: Z. K. Anderson, Regina; C. A. Metcalfe, Tisdellton; and James Graham, Orkney.

Interesting addresses were given by Mr. Moore and Mr. Markler after they had completed the awards. Mr. Moore outlined what the Vancouver dealers wanted when their own-herd creamery butter, while Mr. Markler gave some helpful advice to the buttermen present on how to make the butter worth the price demanded. He referred to some points in the subject of pasteurization, and was of the opinion that 145 degrees held for 20 minutes, is not sufficiently high to produce butter of the best keeping.

(Continued on page 15.)



## THE NEW DE LAVAL CREAM SEPARATOR

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Order your De Laval now and let it begin saving cream for you right away. Remember that a De Laval may be bought for cash or on such liberal terms as to save its own cost. See the local De Laval agent, or if you don't know him, write to the nearest De Laval office as below

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THROUGH the wide world, he only is alone who lives not for another.  
—Rogers.

## The Heart of the Desert

(Continued from last week.)

"No! No! cry little Sun-streak!" she pleaded, putting an arm around Rhoda and holding her to her tenderly. "Any peoples that loves you is your own peoples. Kut-le loves you. Molly loves you. We your peoples too!"

"No! No! Never!" sobbed Rhoda. "Molly, if you love me, take me back to my own kind! You shall never leave me, Molly! I do love you. You are an Indian but somehow I have a feeling for you I never had for any one else."

A sudden light of passionate adoration burned in Molly's eyes, a light that never was to leave them again when they gazed on Rhoda. But she shook her head.

"You ask Molly to give up her peoples but you don't want to give up yours. You stay with Molly and Kut-le. Learn what desert say 'bout life, 'bout people. When you sabb what the desert say 'bout that you sabb almost much as Great Spirit!"

"Molly, listen! When Kut-le and Cesca goes off on one of their hunts I will steal off and hide until night, and you will show me how to get home again. O Molly, I'll be very good to you if you will do this for me! Don't you see how foolish Kut-le is? I can never, never marry him! His ways are not my ways. My ways are not his! Always I will be white and he Indian. He will get over this crazy Molly, listen to your heart! It must tell you white to the white, Indian to the Indian. Dear, dear Molly, I want to go home!"

"No! No! Molly promise Kut-le to keep his white squaw for him. Injuns they always keep promises. And Molly sabb some day when you learn more you be heap glad old Molly keep you for Kut-le."

Rhoda turned away with a sigh at the note of finality in Molly's voice. Kut-le was climbing the trail toward the camp with a little pile of provisions. So far he had not failed to procure when needed some sort of ration—bacon, flour and coffee—though since her abduction Rhoda had seen no human habitation. Cesca was preparing supper. She was pounding a piece of meat on a flat stone, muttering to herself when a piece fell to the ground. Sometimes she wiped the sand from the fall with her handkerchief. More often she flung it into the stew-pot unheeded.

"Cesca!" cried Rhoda, "do keep the burro out of the meat!" The burro that Kut-le recently had acquired was sniffing at the meat. Cesca gave no heed except to murmur, "Burro heap hungry!"

"I am going to begin to cook my own meals, Molly," said Rhoda. "I am strong enough now, and Cesca is so dirty!"

Kut-le entered the camp in time to hear Rhoda's resolution.

"Will you let me eat with you?" he asked courteously. "I don't enjoy dirt, myself."

Rhoda stared at the young man. The calm frontony of him, the cleverness of him, to ask a favor of her! She turned from him to the distant ranges. She did not realize how much she turned from the ruggedness of the camp to the far desert view! Brooding, aloof, how big the ranges were, how free, how calm! For the first time her keeping Kut-le in Coventry seemed foolish to her. Of what avail was her silence, except to increase her own loneliness? Suddenly she smiled grimly. The game was a good one. Perhaps she could play it as well as the Indian.

"If you wish, you may," she said coldly.



The Last of the Potato Harvest.

The illustration herewith shows Mr. and Mrs. Frank Webster, Victoria Co., Ont., bringing in the last load from the potato patch. Helping to harvest this crop is but one of the many ways in which our farm women are helping out in these days of labor scarcity.

Then she ignored the utter joy and astonishment in desert young man's face and set about roasting the rabbit that Molly had dressed. She tossed the tortillas as Molly had taught her and baked them over the coals. She set forth the cans and baskets that formed the camp dinner-set and served the primitive meal. Kut-le watched the preparations silently. When the rabbit was cooked the two sat down on either side of the flat rock that served as a table while the other three squatted about Cesca's stew-pot near the fire.

It was the first time that Rhoda and Kut-le had eaten *teca-teca*. Hitherto Rhoda had taken her food off to a secluded corner and eaten it alone. There was an intimacy in this sitting together at the meal Rhoda had prepared, that both felt.

"Are you glad you did this for me, Rhoda?" asked Kut-le.

"I didn't do it for you!" returned Rhoda. "I did it for my own comfort."

Something in her tone narrowed the Indian's eyes.

"Why should you speak as a queen to a poor devil of a subject? By what particular mark of superiority are you exempt from work? For a time you have had the excuse of illness, but you no longer have that. I should

say that making tortillas was better than sitting in sloth while they are made for you! Do you never have any sense of shame that you are forever taking and never giving?"

Rhoda answered angrily.

"I'm not at all interested in your opinions."

But the young Apache went on. "It makes me tired to hear the white women of your class talk of their equality to men! You don't do a thing to make you equal. You live off some one else. You don't even produce children. Huh! No wonder nature kicks you out with all manner of illness. You are mere cloggers of the machinery. For heaven's sake, wake up, Rhoda! Except for your latent possibilities, you aren't in it with Molly!"

"You have some touchstone, I suppose," replied Rhoda contemptuously, "by which you are made competent to sit in judgment on mankind?"

"I sure have!" said Kut-le. "It is that you so live that you die spiritually richer than you were born. Life is a simple thing, after all. To keep one's body and soul healthy, to bear children, to give more than we take. And I believe that in the end it will seem to have been worth while." Rhoda made no answer. Kut-le ate on in silence for a time, then he said wistfully:

"Don't you enjoy this meal with me, Rhoda?"

Rhoda glanced from Kut-le's naked body to her own torn clothing, then at the crude meal.

as I see it, where you would be forced to see me, the man, far from any false standards of civilization."

Rhoda would have replied but Kut-le gave her no chance. "I know what white conventions demand of me. But, I tell you, my love is above them. I, not suffer! Rhoda! To see you in pain! To see your loathing of me! To have you in distress in my arms and yet to keep you safe! Rhoda! Rhoda! Do you believe I do not suffer?"

Anger died out of Rhoda. She saw tragically the situation. Tragedy that was not hers. She saw herself and Kut-le facially, not individually. She saw Kut-le suffering all the helpless grief of race alienation, as him she, victim of passions as great as the desires of the alien races for the white always must be. Rhoda forgot herself. She laid a slender hand on Kut-le's.

"I am sorry," she said softly. "I think I begin to understand. But, Kut-le, it can never, never be! You are fighting a battle that was lost when the white and red races were created. It can never, never be, Kut-le."

The strong brown hand had closed over the small white one lastingly. "It is my fault," he said bitterly. "I put my whole life on it! It must be! Rhoda pulled her hand away gently. "It never, never can be!"

"It shall be!" he said. "It goes like this comes but seldom to a human. It is the most potent thing in the world. It shall—"

"Kut-le!" Alchise rode forward, pointing to the right.

Rhoda followed his look. It was nearly dawn. At the right was the sheer wall of a mesa as smooth and glassy. Moving toward them, silent as a shadow in the well-lit dawn, and cutting them from the mesa, was a group of horsemen.

### CHAPTER IX. Touch and Go.

The John DeWitt who helped break camp after finding Rhoda's scarf was a different man from the half-crazed person of the three days previous. He had begun to hope. Somehow that white scarf with Rhoda's perfume clinging to it was a living thing to him, a living, pulsating promise that Rhoda was helping him to find her. Now, while Jack and Billy were feverishly eager, he was cool and clear-headed, leaving the leadership to sharing to the right.

Billy still, yet doing more than his share of the work in preparing for the hard night ahead of them. The horses were well watered, their own canteens were filled and saturated and food so prepared that it could be eaten from the saddle.

"For," said Porter, "when we do hit the little girl's trail, starvation or thirst or high hell ain't goin' to stop us!"

It was mid-afternoon when they started down the mountainside. There was no trail and going was painful but the men moved with the care of desperation. Once in the canon they moved slowly along the way and shared two water canteens from the scarf had been found, they discovered a fault where climbing was possible. It was nearing sundown when they reached a wide ledge where the way was easy. Over this to the spot below which flattered a white paper to mark the place where the scarf had been found. The ledge deepened here to make room for a tiny, bubbling spring. Giant boulders were scattered across the rocky floor.

The three men dismounted. The ledge gave no trace of human occupancy and yet Porter and Jack looked at each other.

"Here was his camp, all right. Water, and no one could come within a mile of him without his being seen."

(Continued on page 14.)

# The Upward Look

## "Our Failure."

AND the Gospel must first be published among all nations.—Mark 13:10.

I heard such a conscience stirring address on missions this week by the Rev. Principal Gandler of Toronto, that I just have to impart it to you. To be sure we are not Wesleyans, but it would have impressed one of any denomination.

In the Philippine Islands missionaries have started the first schools which by law have to be kept up to a high standard. The first hour of each day is devoted to Bible study. One of our great plantations, seeing the wonderful results have offered generous school facilities if the Mission Boards will do their share. But those estimates of 1918 must not exceed those of 1917.

In Formosa, George McKay, son of the renowned McKay, has had wonderful offers from the very Chinese who hounded and persecuted his father not so many years ago, towards the equipment of modern up-to-date schools, so sorely needed, but we cannot do our share because the estimates of 1918 must not exceed those of 1917.

In Korea where more wonderful results have been accomplished than anywhere else in the story of missions, and where now the Japanese are getting a strong hold, there is a movement by different denominations to found a great university and hospital, to which only Christian students are eligible. But again we cannot do our share, because of that strangle hold; the estimates of 1918 must not exceed those of 1917.

The Chinese, ever since their defeat by the Japanese, have longed for more education. In China also a movement is well under way, to found another great university, but we cannot pay our share because of that same strangle hold; the estimates of 1918 must not exceed those of 1917.

China under Japanese domination would be a far greater world than Germany would be. What would India have been at this crisis without Christ? When missionaries wanted to go to the front, the Government's request was "Stay where you are."

Yet the estimates of 1918 must not exceed those of 1917, because of our failure to do our part.—I. H. N.

## Do Spring Sewing Early

WINTER is a good time to get rid of the spring sewing. In fact it is almost necessary to do our sewing within the next month or two if we expect to keep up our spring work later on. January is usually looked on as a good month in which to buy whitewear and cotton, and while the whitewear sales are now on, we may have to watch them pretty closely if we are to get any "bargains," as the price of cotton is high nowadays.

We hear much about system in our household, and probably there is such a thing as overdoing system, but in the case of getting rid of the sewing for next spring and summer, and for doing it in practicing a little system. For instance, it is a good idea to go through last year's clothes, if we are not already familiar with just what we have on hand, and make a list of the needs as near as possible of each member of the family. It is a good idea then to buy in fairly large quantities, especially for underwear and clothes for practical wear, also thread, buttons, fasteners, etc., so that everything will be on hand to work with.

Cutting out garments usually takes considerable time, and the best plan seems to be to cut out a number at once. It stands to reason that after we have cut out a garment we can go

ahead and cut another of the same style more quickly than we did the first. Before commencing machine sewing, it is a good plan to overhaul the machine, see that it is properly oiled, that the bobbin is feeding properly, the needle is a good one, etc. It is in aggravating to sit down to the operations, and find something out of order.

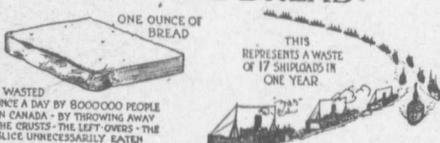
Some women follow the plan of doing the necessary basting first on all the garments, then run up the seams first on each buttonhole, are required. If interrupted by visitors, it is necessary to lay aside the work up to odd moments, and be picked up when needed.

Of course it is not possible to make all the clothes required for summer and spring at this early date, as we do not know just what styles will prevail. Everything except dresses for Sunday or special occasions, however, can be made up now. By studying the fashion books, too, we will no doubt come across styles from which we may get ideas for re-modelling some of last year's costumes.

agricultural colleges, but heretofore the training in rural schools has been too much away from rural life. A course in the Collegiate Institute is always held up to the girls and boys in the country. The rural school should prepare for rural life as well as for learned professions, and be associated with agricultural colleges as well as linked up with the university.

The first thing necessary is to get some kind of public sentiment behind these schools. I believe the Women's Institute could create a better sentiment along this line. In these days of anxiety and suffering, the women have demonstrated their capacity for leadership and their ability to discharge responsibilities ascribed to them. The dirty and one-year washed floors and windows, unkept gardens, broken-down fences, old stove pipes and unsanitary outbuildings, will receive attention if the women take it in hand. Another very serious evil in our rural schools is the irregular attendance. There is a dancer for the future of the boy on the Ontario farm. If there is any work to be done at home

## SAVE THE BREAD:-



"I am a Slice of Bread. I measure three inches by two-and-a-half, and my thickness is half-an-inch. I am wasted once a day by 8,000,000 people in Canada. I am the bit left over; the slice eaten absent-mindedly when really I wasn't needed; I am the waste crust. You collected me and my companions for a whole week you would find that we amounted to 1,750 tons of good bread WASTED. Seventeen shiploads of good bread wasted every year by the people of Canada—more than 3 German submarines could sink—even if they had good luck. When you throw me away or waste me you are adding three of the most effective submarines to the German Navy."

## STOP ALL WASTE.

Adapted from a pamphlet issued by the National War Savings Committee, London, England.

## The Women's Institute and the Rural School\*

Inspector H. H. Burgess, Grey Co., Ont.

THE rural school is a big problem, and is a part of the rural problem which must be solved. We hear much about rural depopulation, and some means must be found to keep the young people on the farm. There is a movement of the people in some way from the rural parts of Ontario. This problem cannot be solved by any one agency, but better pay to the farmer for his products, better homes and better schools, will be great factors in reconstructing social conditions.

We believe we have an excellent system of education in Ontario. Our teachers are trained in normal schools, faculties of education and

he is kept out of school. Every time I get into a school I make it a point to examine the register, and it is amazing to see how many boys are there two days, then out three. If you speak to the parents they will tell you that the boys go to school all right and are just kept out occasionally. A great many of our boys never get beyond the third book. The boys and these girls are not going to seek their life partners among the boys of the country, because they are not as well educated as the girls. This loss of the girls is a serious one, and I think the Women's Institute can help out in this way.

The school is the home of the children for five days in the week. It would be a good idea for the Women's Institute in each community to ar-

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is a light draft implement, in spite of its superior strength. Teeth are strongly reinforced and will stand all the hard work they will get. Sections are made from extra heavy steel. See the Peter Hamilton Cultivator before buying.

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range to have a few more annual school picnics and bring children, mothers and fathers together in this way. Many things could be discussed and suggestions made for improving conditions in each section. The Women's Institute has a great field of opportunity for higher ideals in connection with school life, and will do well to endeavor to improve the school grounds, outbuildings, etc. It would suggest that the women of each school section crowd the school on the day of the annual school meeting, and let the men know just what they would like to have done.

### Cleanings From the Toronto W. I. Convention

IN discussing the food pledge cards, one delegate remarked: "Have we any guarantee that the food we are saving is going to reach our boys overseas, and not go to those who have their millions, or perhaps to fill the storehouses of the country? That is where our pledge cards have fallen down. The women feel that they do not know where that food is going."

"Don't you think the men are to blame for the lack of saving in our homes?" said another delegate. "Just let the man of the house go away for dinner and see what the woman has."

A commendable feature in connection with the sessions of the Women's Institute Convention in Toronto this year, was the interspersing of musical selections throughout the sessions. It is very tiresome to sit for several hours at a time listening to reports and addresses, even though they are interesting, and a musical selection occasionally relieves the situation nicely.

"One of the most hopeful signs of the times," said Dr. Margaret Patterson during the discussion of venereal diseases, "is the same view which is being taken of this question. Some of us have been here for a long time, but people did not realize just what it would mean to give the children a proper understanding of the great things of life. I am absolutely convinced that lack of reverence is due to the fact that children have been brought up ignorantly. They should be given an understanding that everything comes from God and in order to do this it is necessary to teach sex hygiene, but in a way that will give a child a proper appreciation of these things. A great many of us have not gone about raising our children as scientifically as we raise our hens. The government is offering the right kind of literature freely and I would like to see every representative of the Women's Institute at this convention to secure this literature by setting in touch with the Provincial Department of Health. This paper plane we can set for our children the better, and we cannot do this unless we teach them the truth as God expected us to do."

In the discussion in connection with exercising greater care of the teeth, Dr. Mary McKenzie Smith said: "A school teacher can help very materially in encouraging children to give proper attention to their teeth. One teacher of whom I first adopted a splendid plan. The children's names were written down and opposite them stars, crowns or crescents placed if they came to school with clean finger nails and teeth properly brushed. This instruction may be given in the schools if mothers will do their share at home in seeing that the children do look after their teeth. The reason there are so many tooth aches is on account of so much sugar and rich food being eaten that it makes the saliva thick and prevents food being properly masticated. If we would eat simpler food, chew it properly and

thus strengthen the muscles around the teeth, they would be greatly improved. As I go through the country I find that not one in ten cent of the tables do children drink milk. It is weak tea with plenty of sugar in it."

"One of the greatest causes for the success of our annual Women's Institute Conventions," said Mrs. R. V. Fowler, of Perth, "lies in the fact that the busy men have no more time to come and address us. To the average delegate from the country or small rural district it is a distinct gain and inspiration to hear these splendid addresses."

### The Heart of the Desert (Continued from page 12.)

"He's still covering his traces carefully," said Jack. "Not so very," answered Porter. "He's banking a whole lot on our stupidity, but Miss Tuttle beat him to it with her snarl. The three men treated the ledge to a microscopic examination but they found no trace of previous occupation until Billy knelt and put his nose against a black out-cropping of stone in the wall. Then he gave a satisfied grunt.

"Come here, Jack, and take a sniff." Jack knelt obediently and cried excitedly: "It smells of smoke, by Jove! Don't it John, old snout?" "They knew smoke wouldn't show against a black out-crop, but they didn't bank on my nose!" said Billy complacently. "Come aboard, boys."

A short distance from the spring they found a trail which led back up the mountain, and as dusk came on they followed its dizzy turns until darkness forced them to halt and wait until the moon rose. By its light they moved up into a pinnac forest.

"Let's wait here until daylight," suggested Jack. "It's a good place for a camp."

"No, it's too near the ledge," objected Billy. "Of course we are working on faith mostly. I'm no Sherlock Holmes. We'll keep to the backbone of this range for a while. It's the wildest spot in New Mexico. Kettle will avoid the railroad over by the next train."

So Billy led his little band steadfastly southward. At dawn they met a Mexican shepherd herding his sheep in a grassy canon. Jack Newman called to him eagerly and the Mexican as eagerly answered. A visitor was worth a month's pay to the lonely fellow. The red of dawn was painting the fleecy backs of his charges as the tired Americans rode into his little camp.

"Seen anything of an Indian running away with a white rite?" asked Billy without preliminaries.

"The Mexican's law dropped. "Sicra Maria! he gasped. "Not I! Who is she?"

"Jaten!" broke in Jack. "You be on the watch. An educated Indian has stolen a young lady who was visiting my wife I own the Newman ranch. That Indian Cartwell it was, three days ago."

John DeWitt interrupted. "If you can catch that Indian, if you can give us a clue to him, you needn't hunt about any more. Lord, man, seek 'n' don't stand there like a chump!"

"But, seniors!" stammered the poor fellow to whom this sudden forest of conversation was as overwhelming as a cloudburst. "But I have not seen—"

Billy Porter spoke again.

"Hold in, boys! We are scaring the poor devil to death. Friends, rest here a while, we'll have breakfast here with you. If you don't object, and tell us our troubles."

The shepherd glowed with hospitality. (To be Continued.)

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CHEESE FACTORY FOR SALE, at Oxford Mills, capacity \$20,000 (the Apply J. W. Fretwell, Oxford Mills, Ont.)

FOR SALE—Butter factory in complete running order, with nearly new Victor Churn and about \$600 worth of supplies; situated in village of Bluevale, 1 1/2 miles from railway station. Dwelling house in factory. Appl. Bluevale Cheese & Butter Co. Ltd., Bluevale, Ont.

WANTED—Competent young married man to work on Alberta grain farm, \$500 for eight months, beginning April first. Free house and garden. W. M. Sanders, Lethbridge, Alberta.

WANTED—Cheesemaker for Ridge Top Factory—married man preferred. Free house supplied, market for supplies and state at what price per hundredweight will make for. Make last season's 500. Appearances for particulars by the Secretary, Wm. H. Trick, Thorford, Ont.

LADIES WANTED to do plain and light sewing at home, whole or part time; good pay; work sent any distance; charges prepaid. Send for particulars. National Manufacturing Co., Montreal.

**Saskatchewan Dairymen Meet in Convention**

(Continued from page 11.)  
 quality. He pointed out that in Alberta during the past year a large percentage of the cream was heated to 150 degrees and over, and better results have been obtained on account of the higher temperature.

Mr. C. E. Thomas, of Lloydminster, and Mr. B. H. Thompson, of Boharm, both leading dairymen in their different localities, gave interesting addresses on the improvement of dairy herds. Mr. Thompson is the possessor of about 20 cows in the Record of Performance class, and is one of the most successful dairymen in Saskatchewan. Mr. Thomas is a breeder of purebred Ayrshires, and has, by careful breeding, feeding and close attention, made remarkable progress in the development of his herds.

In the election of officers for this year Mr. A. H. Salmon, of Kelso, was elected as President, and Prof. K. G. MacKay as Secretary.

**The Makers' Corner**

Butter and Cheese Makers are invited to send questions to this department, to ask questions on matters relating to cheese making, and to suggest subjects for discussion.

**Dairy Awards at Stratford**

THE dairy awards at the Winter Dairy Exhibition, Stratford, held in connection with the W.O.D.A. Convention, were as follows:

**September White Cheese**—1. C. J. Donnelly, Lambeth, 95.80; 2. J. E. Stadelbauer, Vienna, 85; 3. Wm. Morse, Stratford, 83.60; 4. Wm. Jamieson, Dorchester, 86.50; 5. J. W. Carter, Stratford, 86; 6. L. H. Schneider, Rostock, 86.00; 7. J. T. Donnelly, Scarba, 85.75; 8. A. D. Riddle, Lambeth (won on favor), 85.40; 9. F. C. Eastman, Arkona, 85.50.

**September Colored Cheese**—1. C. J. Donnelly, 97.60; 2. Wm. Morse, 97.00; 3. Wm. Jamieson, 96.75; 4. E. L. Abbott, Dorchester, 96.50; 5. W. T. Oliver (won on favor), 96.25; 6. M. Johnston, Inverkip, 96.25; 7. J. T. Donnelly, 95.80; 8. H. Youn, Ludlow, 95.75; 9. J. W. Robinson, Stratford, 95.50.

**October White Cheese**—1. C. J. Donnelly, 98.00; 2. J. E. Stadelbauer, 97.60; 3. Wm. Morse, 97.50; 4. E. H. Johnston, 96.00; 5. J. T. Donnelly and H. Hammond, Moorefield (ties won on favor), 95.50; 6. H. E. Donnelly, Stratfordville, and Jon Skelton, Kintore (ties), 95.50; 7. W. T. Oliver, 95.50.

**October Colored Cheese**—1. C. J. Donnelly, 98.00; 2. J. T. Donnelly, 97.00; 3. W. T. Oliver and Jon Skelton (ties), 95.50; 4. Wm. Morse and Wm. Loughtin, Thameford (ties), 95.00; 5. L. H. Schneider (won on favor), 95.75; 6. H. Youn, 95.75; 7. H. E. Donnelly, 95.60.

**Three Sifton Cheese**—1. C. J. Donnelly, 97.80; 2. H. E. Donnelly, 97.60; 3. Wm. Jamieson, 96.50; 4. W. T. Oliver, 96.00; 5. Jon Skelton, 95.75; 6. Wm. Morse, 95.50.

**Two Flat Cheese**—1. Wm. Jamieson, 97.00; 2. F. C. Eastman and J. T. Donnelly (ties), 95.00; 4. C. J. Donnelly and M. Johnston (ties won on favor), 88.00; 5. Jon Skelton, 96.00; 6. Wm. Morse and H. Youn, (ties), 85.50.

**Butter Awards.**

**56-B Box Butter**—1. Jno. R. Almont, Silverdale, 97.00; 2. J. M. McNamee, Stratford, 95.50; 3. R. A. Dennis, Strathroy, 94.50; 4. W. C. Mehl, Woodburn, 93.50; 5. H. F. Miser, Palmerston, 93.25; 6. Jas. E. Wilson, Forest, 92.50; 7. H. A. Clark, Warsaw, 92.00; 8. J. W. Carter, Stratford, 92.25; 9. Whyte Packing Co., Brockville, 92.50.

**50 One-pound Prints**—1. Jno. R. Almont, 95.50; 2. Whyte Packing Co., 94.50; 3. H. A. Dennis, 93.50; 4. H. C. McNamee, 93.25; 5. H. A. Clark, 93.00; 6. J. M. McNamee, 92.75; 7. W. G. Medd, 92.50; 8. H. J. Neesh, Tavistock, 92.25.

**October 56-B Box Butter**—1. R. A. Dennis, 95.50; 2. Jas. E. Wilson, 94.50; 3. W. T. Oliver, Forest, 94.00; 4. W. G. Medd, Jackson, Rimous, 93.50; 5. Whyte Packing Co., 93.00; 7. Mack Robertson, Belleville, 93.75; 8. W. G. Medd, 92.50; 9. H. A. Clark, 92.00.

**14-B Box September Butter**—1. W. G. Jackson, 93.00; 2. Jas. H. Ross, 91.00; 3. Jas. E. Wilson, 89.00; 4. C. E. Baxter, Toronto, 88.00.

Winner of Imperial Bank Butter Cup, for highest scoring cheese: C. J. Donnelly, Lambeth.  
 Winner of Produce Exchange Silver Shield for highest scoring butter: Jno. R. Almont, Silverdale.

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 No. 1 Alsike ..... 16.50  
 Alfalfa, Ontario Vegetated, No. 2, almost No. 1 for purity ..... 25.00  
 No. 1 Timothy, extra No. 1, for purity ..... 6.25  
 No. 2 Timothy, extra No. 1, for purity ..... 5.75  
 No. 2 Timothy, No. 1, for purity ..... 5.25

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never become muddy—because the particles are "bound" together by Portland Cement—forming a road as durable as your Concrete Silo or your Concrete Barn Foundation.



**Ayrshire News**

**AYRSHIRE COWS AND HEIFERS THAT HAVE QUALIFIED IN R. D. F. FROM DEC. 15 TO JAN. 4, 1918.**

**Mature Class.**  
 Lady Jane, 30864; 13,100 lbs. milk, 514 lbs. fat, 2.92 per cent. fat. A. S. Turner & Son, Ryckman's Corner, 11,199 lbs. milk, Mountain Lass, 26327; 11,199 lbs. milk, 460 lbs. fat, 4.02 per cent. fat. A. S. Turner & Son.  
 Selwood Brown Queen, 45000; 9,327 lbs. milk, 329 lbs. fat, 4.27 per cent. fat. J. L. Stansell, Strathroyville.  
 Fride of Darlington, 32344; 9,321 lbs. milk, 400 lbs. fat, 4.28 per cent. fat. J. L. Stansell.  
 White Ploas, 32738; 8,587 lbs. milk, 349 lbs. fat, 2.0 per cent. fat. W. H. Green, Bradford.

**Four-Year-Old Class.**  
 Lady Ploas of Springbank, 41070; 8,258 lbs. milk, 325 lbs. fat, 3.92 per cent. fat. A. S. Turner & Son.

**Three-Year-Old Class.**  
 Lenore 2nd, 38154; 11,302 lbs. milk, 496 lbs. fat, 4.38 per cent. fat. Harmon McTherson, Orkney.  
 Star's Pansy, 40643; 10,179 lbs. milk, 478 lbs. fat, 4.59 per cent. fat. Joseph Thompson, Sardinia.  
 Star's Lassie, 40651; 9,867 lbs. milk, 379 lbs. fat, 4.81 per cent. fat. Joseph Thompson.

Alancroft Hillarious, 43973; 8,473 lbs. milk, 462 lbs. fat, 4.74 per cent. fat. J. L. Stansell, Strathroyville.  
 H. Montague Allan, Beaconfield, Que. Bertha, 4664; 8,318 lbs. milk, 371 lbs. fat, 4.46 per cent. fat. Bert H. Brown, York, P.E.I.  
 Springbank Speck, 47564; 8,019 lbs. milk, 307 lbs. fat, 3.82 per cent. fat. A. S. Turner & Son.  
 Aldermoor Soney 2nd, 42394; 7,709 lbs.

**SALE DATES CLAIMED**

**PETERBOROUGH COUNTY.**  
 Mr. J. K. Moore, of Peterboro, Ont., announces Wednesday, February 20th, 1918, as the date for his clearing out sale of Holstein cattle and all other farm stock and implements.

**WATERLOO COUNTY.**  
 Thursday, February 21st, 1918, is the date of the sale of Holsteins of Mr. Wm. A. Rife, of Heapsier, Ont.  
 Henry Knell, Brimley, Ont., has a Dispersion Sale of 28 head Registered Holsteins, Date, 27th Feb.

**BRANT COUNTY.**  
 E. C. Chambers & Sons, of Fair View Stock Farm, R. R. No. 1, Hatchery, Ont., have selected March 6th for their Dispersion Sale of Registered Holstein Cattle.

**PERTH COUNTY.**  
 The Perth District Holstein Breeders' Club will hold their first sale on March 13, 1918.

**OXFORD COUNTY.**  
 There will be a sale of the Holstein herd of Edwin C. Chambers & Son, of Fairview Stock Farm, R.R. No. 1, Hatchery, Ont., on Tuesday, March 6th, 1918.

Wednesday, March 6th, is the date of the complete dispersion sale of the Quaker's herd of fifty pure-bred Holsteins, at Woodstock, Ont. J. F. Mahon is the proprietor.

H. C. Hamner, of Norwich, Ont., will hold a complete dispersion sale of his entire herd of pure-bred and grade Holsteins, on Friday, March 15th, 1918.

The Oxford District Holstein Breeders' Club will hold a confirmation sale of registered animals at Woodstock, Ont., on March 20th, 1918. W. E. Thomson, Woodstock, is the Secretary.

milk, 810 lbs. fat, 4.03 per cent. fat. Edwin A. Wells, Sardinia, E.C.  
 Selwood Hoosom, 49770; 7,544 lbs. milk, 384 lbs. fat, 5.08 per cent. fat. J. L. Stansell, Strathroyville.

**Two-Year Old Class.**  
 MacGregor's Laurie May, 41908; 13,060 lbs. milk, 500 lbs. fat, 3.85 per cent. fat. Nova Scotia Agricultural College, Truro, N.S.  
 White Lady of Springbank, 44102; 8,930 lbs. milk, 414 lbs. fat, 4.27 per cent. fat. A. S. Turner & Son.  
 Lone Pine Belle, 45051; 9,427 lbs. milk, 486 lbs. fat, 4.93 per cent. fat. Edwin Reid, Rolle Bay, P.E.I.  
 Lolo of Springbank, 44089; 8,292 lbs. milk, 307 lbs. fat, 3.81 per cent. fat. A. S. Turner & Son.  
 Alancroft Meadow Sweet, 45089; 8,107 lbs. milk, 277 lbs. fat, 4.85 per cent. fat. Sir H. Montague Allan, Beaconfield, Que.  
 White Ploas 2nd, 43221; 8,019 lbs. milk, 339 lbs. fat, 4.22 per cent. fat. Frank A. Wight, Theford, Springbank, Jones, 47400; 6,810 lbs. milk,

370 lbs. fat, 2.96 per cent. fat. A. S. Turner & Son.  
 Terrace Bank Topay, 41883; 8,446 lbs. milk, 275 lbs. fat, 4.12 per cent. fat. W. L. Begg, Moose Creek.  
 W. F. STEPHEN, Secretary.

**AYRSHIRE NOTES.**

**WHILE** in Eastern Ontario recently our representative called on W. L. Begg, of Moose Creek. Mr. Begg has a nice herd of Ayrshires. At present he is rather understocked, having recently disposed of quite a large consignment at tempting prices, to Massachusetts at Stoney Croft Farm, St. Ann's, Que.

The herd sire in this herd is Honnie Bree Perfection by Nathaniel Sir Douglas, work in R. D. F. and has now considerable cows with records of 10,000 lbs. per season, and setting over four per cent fat on twice a day milking.

**CANADIAN AYRSHIRE BREEDERS' ASSOCIATION—ANNUAL MEETING.**

**THE** Annual Meeting of the Canadian Ayrshire Breeders' Association will be held in the Carle-Rife Hotel, Toronto, on Thursday, February 21st, 10 o'clock a.m., to hear reports of the President, Secretary-Treasurer, Registrar, Record of Performance Trust, and the Executive Committee. Also for the election of officers and for the transaction of any other business that may properly come before the meeting.

All interested in the breeding of Ayrshire cattle are invited to attend. The Directors will meet in the parlors of the Carle-Rife Hotel, on Wednesday, February 20th, at 10 o'clock a.m. A Banquet will be held in the Carle-Rife Hotel on Wednesday evening, at 7 o'clock.

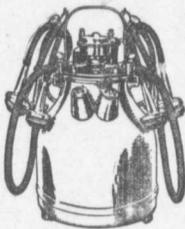
The following have consented to address the banquet: Frank W. H. Hearsh, Minister of Agriculture for Ontario; J. G. O'Connell, Commissioner of Agriculture for Ontario; Prof. H. S. Arkell, Live Stock Commissioner; Prof. H. Barton, of Macdonald College, Que.; Prof. G. Watson, Field Secretary, American Ayrshire Association.

You are cordially invited to attend this banquet and hear Ayrshire interests discussed. Bring your lady friends with you. Tickets for banquet \$1. Please drop the Secretary a postcard by the 16th of February, if you purpose attending the banquet.

It is expected that the railways will extend the usual one-way fare on standard certificate plan. If so, certificates will be valid by an agent of the railways for Ontario; Prof. H. S. Arkell, Live Stock Commissioner; Prof. H. Barton, of Macdonald College, Que.; Prof. G. Watson, Field Secretary, American Ayrshire Association.

**Had Thirty Cows: Intended Selling**

He was tired of the drudgery of handmilking, tired of hired help always complaining. So he thought of selling his thirty cows. Instead he got a Burrell outfit.



**BURRELL B-L-K MILKER Good for the Herd**

Now he has increased his herd to 60 cows. He is contented; so is his hired help. He lets it off Sundays, and with his boy does the milking easily.

That is an old repeated experience. One average man with two 2-cow Burrell Milkers can milk from 24 to 30 cows an hour; do the work of three hand-milkers, and do it well.

Write now for our illustrated book containing the experiences of many dairymen.

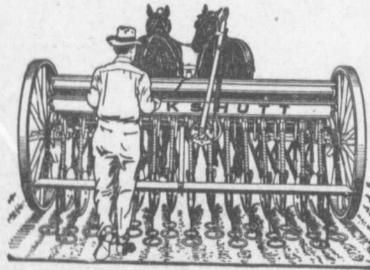
**D. DERBYSHIRE CO., Limited Brockville, Ontario**

**WESTERN ONTARIO CREAMERY FOR SALE.** Buildings and equipment in first class condition. Make last season over 100,000 lbs. For particulars apply to Box 44, Farm and Dairy, Peterboro, Ont.

**A FAVOR OF YOU** Please mention FARM AND DAIRY when writing to our advertisers.

**COCKSHUTT DISC DRILLS**

**Superior construction guarantees rapid, easy, correct seeding**



The heavy sales of Cockshutt Disc Drills show the up-to-date farmer realizes that only the best is good enough for such an important work as seeding. A Disc Drill must have a big margin of strength and reliability so as not to "fall down" at a critical time. Be wise; get a Cockshutt.

Seeding time may be short and labor scarce! So the Cockshutt Disc Drill is built strong, but it is built for speed. Its light draft makes for rapid work in any kind of soil, rough or well settled, hilly or level. The discs open a channel wide enough for even planting, the shoes are non-clogging and plant the seed at any desired depth to suit any land. Trash cannot lodge in the discs—they "draw away" from the shoes. The heavy, high-arched I-beam—the "back-bone" of the machine—is immensely strong and rigid, preventing the slightest warping or sagging in the centre. The feed is positive and simple. Doesn't get out of order—doesn't crack or bruise the seed—sows any quantity to the fraction of a pint.

Cockshutt Standard Drills are built in 12, 13 and 15 Disc sizes with 6-inch spacing, and in 11 and 13 sizes fitted with either single discs or hoes, with 7-inch spacing.

Cockshutt Grain and Fertilizer Drills Drill fertilizer into trench with ease. Accurate work, durability and light draft are three dominant Cockshutt qualities in this splendid implement for bringing your land back to virgin fertility in a systematic, positive way. Made in 8, 11 and 13 sizes, fitted with either single discs or hoes, with 7-inch spacing between.

Get Cockshutt Disc Drill Booklet from our nearest Branch, it gives you fullest particulars.

**COCKSHUTT PLOW CO.** Limited BRANTFORD, ONT.

Sold in Eastern Ontario, Quebec and Maritime Provinces by

**The FROST & WOOD Co.** Limited Montreal, SMITH'S FALLS, St. John

# JERSEYS

Get a Bull From a Cow Like This

Here are a few to choose from:

No. 1—Dam Rosa, whose dam is sister to Sadie Mae, 15,211 lbs. milk, 904 lbs. butter in 1 yr. (Canadian record when made).

No. 2—Dam Miss Burity, a 2 yr. old daughter of Rosa.

No. 3—Dam Sadie Mae 2nd, 8,446 lbs. milk, 704 lbs. butter in 1 yr. Highest record under 2 yrs. old.

These three are sired by a son of Sadie Mae 2nd, 5,446 lbs. milk, 704 lbs. butter, a bull of good individuality and breeding.

No. 4—Dana Ada St. Lambert, sired by a son of Sadie Mae, former Canadian champion.

These young chaps are all AI individuals. Well grown, of good straight lines and ready for service. For several years I have been working in a strain of Jerseys that have type, size, and productive ability.

I offer these bulls at reasonable prices and he who secures one must speak quick. Write at once for particulars, or better still, come and see them and their dams before they are sold.

EARNEST E. CRADDOCK, R.R. 3, Hagersville, Ont.



FOXYS QUEEN.

Under 2 yrs. old, in 11 months gave 8,711 lbs. milk, 550 lbs. butter. Has given 54 lbs. milk in 1 day. Note the splendid udder on this heifer. She is but one of many that you can see in my barn when you come to choose your sire.

## LAKESIDE AYRSHIRES

A choice selection of young bulls for sale from Record of Performance dams, imported and Canadian bred. Sires: Auchincloss Sea Foam (Imp.), 2:18; many times grand champion, Fairfield Mains Freeway (Imp.), 5:17; a son of the noted Holstein Perfect Prince. Write for catalogue.

Proprietors: GEO. MONTGOMERY, Dominion Express Bldg., Montreal.

Manager: D. MCARTHUR, Phillipsburg, Que.

## A Sire To Make Records

We are offering for sale a young sire born 10th September, 1917, out of HELEN JEAN, whose excellent record is given elsewhere in this issue.

This is a very fine calf, being nearly pure white. His sire is PRINCE BONNIE OF SPRUCE ROW, grand sire H.O.P.'S CRUSADER, and grand dam MISS BLANCHE, 24,693. Row's 9,691 lbs. milk, 424 lbs. butter fat.

This is an excellent opportunity to secure a young sire that is sure to make records that will be a credit to your herd. Write for further particulars to

Geo. Annear, R.R. No. 2, Montague, P.E.I.

**AYRSHIRE CATTLE**

4.07 Per Cent BUTTER FAT

was the average from 71 Ayrshire cows for one year.

Write for Booklet.

W. F. STEPHEN, Secretary Canadian Ayrshire Breeders' Association, Box 508 Huntingdon, Que.

### AYRSHIRES

**Two Rickly Bred Bulls For Sale**  
One 8 mos. whose old dam's sire is St. Simon, the sire of Auchincloss Brown Kate, with over 22,000 lbs. milk record. The other 29 months, whose dam is a two-yr.-old record 8,559 lbs. milk, 566 lbs. fat. His gd. sire is Lesneskau Comet (Imp.). Also a few cows.

R. W. WILLIAM BRITTON, R. R. No. 1, Clinton, Ont.

### WANTED

Five Good Milk Cows, Good Grades or Thoroughbreds. Must be reasonable. Also a Haystack and Roller. Full particulars and best price to

HARRY EDWARDS, 152 Bay Street - Toronto.

## MARKET REVIEW AND FORECAST

TORONTO, Jan. 28.—Inactivity continues the chief feature of the grain market. This is not due to lack of buyers, but to lack of grain coming on the market. Grains on which the price has not been set are steadily climbing. Manitoba oats being quoted last week as high as 11.00 in Toronto, air-lifted to 11.00. Such prices put this grain almost out of reach of the users. Ontario oats are conspicuous by its absence from the market. Despite earlier reports of a bumper crop, farmers will not sell off their oats, and for that matter, any grain, until they see supplies of the long-expected American corn coming nearer.

So far there has been no supplies of corn worth mentioning coming into Canada to relieve the feed situation. The Food Controller issues statements periodically to the effect that efforts will be made to have this commodity placed within the reach of the feeders as soon as possible, but for some reason it appeared to be almost impossible to get even small quantities of corn. Barley has been climbing in sympathy with other grain, and is now quoted at 11.48 to 11.48. Millfeeds, while quoted at nominal figures, are impossible to get.

The advance in the price of live stock which took place during the period of the recent storm has given way to a decline in the prices of most animals. This is, however, the usual procedure in the live stock market. When supplies are coming in slowly, the packers are ready to buy, as soon, however, as supplies come in more freely, packers slow up in their buying until they are able to reduce the price to suit themselves.

### WHEAT.

There is practically no report being marketed. Several mills are expected to be closed for lack of supplies. The local grain is not coming to the market as readily as had been expected, and in the absence of corn for feeding it is reported that considerable quantities of wheat are being fed on the farms. Quotations: Manitoba Wheat—In store, Fort William, nominal (including 2 1/2% tax); No. 1 northern, \$2.23 1/2; No. 2 northern, \$2.19 1/2; No. 3 northern, \$2.16 1/2; No. 4 wheat, \$2.10 1/2.

### COARSE GRAINS.

The market for coarse grains is characterized by rising prices all along the line, with oats being at from 90c to 1 1/4 a bushel. Barley quotations are an advance of three cents during the week, and so far no supplies of American corn have come forward to relieve the feeding situation. Quotations: Manitoba oats, No. 1, W., 85 1/2c; No. 2, W., 83 1/2c; extra No. 1, W., 82 1/2c; No. 1 feed, 75c. In store, Fort William, Ontario Wheat—In store, No. 2, \$2.22; No. 4 local white, 94c. Bran—35c. Shorts \$46. Middlings—\$44 to \$50. Meal—\$56 to \$58. Hay—No. 2, per ton, carlots, \$14.60 to \$15.60.

### MILL FEEDS.

The scarcity of wheat is making itself felt in the mill feed market. Feeders of live stock have so far been unable to procure a sufficient quantity of mill feeds, for the simple reason that none are to be had. The shortage of mill feeds of bran and shorts throughout the country, and farmers are offering in some cases to pay considerable advances over the prices fixed, but apparently until supplies of wheat are larger, the mill feed situation will not be eased. Quotations: Car lot delivered, Montreal freight—bran, 35 1/2c; shorts, 44c; middlings, 45c to 46c; mixed feed, per bag, \$3.25. Montreal car lots, 35c to 36c; middlings, 44c to 45c; meal, 56c to 58c.

### HAY AND STRAW.

The hay market is firm at prices somewhat in advance of those that have been ruling lately. Forward quotations on straw, No. 1, \$16 to \$17, mixed, \$15 to \$16; straw car lots, \$14.50 to \$15. Montreal quotes hay, No. 2, car lots, \$14.50 to \$15.50.

### SEEDS.

Wholesalers are paying the following prices for seed at country points: Aukley, No. 1 fancy, \$12.50 to \$12.50; do. No. 1, ordinary, \$1.25 to \$1.25; do. No. 2, per bushel, 10.00 to 11.00.

do. No. 3, per bushel ... 8.60 to 9.00  
Red clover, No. 2, bush ... 11.00 to 11.75  
do. No. 3, bush ... 8.50 to 9.25  
do. rejected, bushel ... 6.25 to 6.75  
Timothy, No. 1, per cwt. ... 8.75 to 9.00  
do. rejected, per cwt. ... 6.25 to 7.00  
do. No. 2, per cwt. ... 7.75 to 8.00  
do. rejected, per cwt. ... 6.25 to 6.75  
Flax, bushel ... 3.15 to 4.00

### POTATOES AND BEANS.

Supplies of potatoes coming to the market are not large, and prices are ruling a little higher than they were a couple of weeks ago. Toronto is quoted at \$2.50 per bag, and Denbair, at \$2.50 a bag. The Food Controller states that there are plenty of potatoes in the country, and it advises farmers to market their own.

Beans, Canadian prime, are quoted, per bushel, \$7.50 to \$8; foreign hand-picked, \$6.75 to \$7 per bush.

### EGGS AND POULTRY.

The receipts of eggs have not yet increased to any extent, and prices continue firm. The prices of storage eggs have gradually advanced during the last few weeks as a result of heavy demands for eggs for the local market. Eggs are extremely difficult to obtain. An increase in the supply of fresh eggs, however, is looked for by the local market. Eggs are being bought at country points, cases retaining their own price, and are being sold to the retail trade—No. 1 storage, 45c to 47c; selected storage, 51c to 52c; new-laid, 45c to 47c.

A firm feeling prevails in both dressed and live poultry markets. Supplies are light and storage stocks are small. Toronto quotes:

Live weight. Dressed.  
Chickens, spring ... 21c to 23c 25c to 28c  
Hens, over 4 lbs. ... 18c to 20c 24c to 24c  
Hens, over 4 lbs. ... 25c to 27c 27c to 30c  
Roosters ... 20c to 26c 26c to 30c  
Turkeys ... 30c to 36c 36c to 40c  
Geese ... 25c to 28c 32c to 34c

### DAIRY PRODUCE.

The price of creamery butter has advanced a cent during the week. Supplies of fresh butter coming forward are small, and stocks on hand are rapidly decreasing. Wholesalers are paying for creamery solids at country points, cases retaining their own price, and are being sold to the retail trade—No. 1 storage, 45c to 47c; selected storage, 51c to 52c; new-laid, 45c to 47c. The price of creamery solids at the retail trade is 47c to 48c; fresh creamery—No. 1 storage, 45c to 47c; selected storage, 51c to 52c; new-laid, 45c to 47c. The price of dairy butter, country points, is largely dependent on the price asked for creamery.

### LIVE STOCK.

An increase in the offerings and a consequent decline in prices from 50c to 75c was the chief feature of last week's market. The total receipts for cattle were 8,817, the quality being very fair. Choice butcher steers and butlers brought from \$10.50 to \$12 per cwt.

There was a light run of sheep and lambs this week, the supply in the country at the present time being at a low ebb. Spring lambs were sold at the close at \$14 to \$15.50, while those were from \$10 to \$11. Choice veal calves sold as high as \$17, but on a large scale they were easier at from \$14 to \$15.50.

Choice export steers ... \$12.00 to 12.50  
Butcher's choice ... 10.25 to 11.00  
do. good ... 8.75 to 9.25  
do. medium ... 8.50 to 9.00  
Butcher's bulls, choice ... 10.50 to 11.50  
do. good ... 8.50 to 9.50  
do. medium ... 8.25 to 9.25  
Butcher's cows, choice ... 9.00 to 10.50  
do. good ... 8.00 to 9.00  
do. medium ... 7.68 to 8.00  
Milk cows, choice ... 9.00 to 9.50  
do. medium ... 8.00 to 8.50  
Common ... 5.00 to 5.50  
Milkers' good choice ... 12.50 to 13.00  
do. com. and medium ... 10.00 to 11.00  
Cows, medium ... 14.00 to 15.00  
do. medium ... 10.00 to 11.00  
do. common ... 8.00 to 9.00  
do. best ... 10.00 to 11.00  
Spring lambs, ewe ... 18.00 to 18.75  
do. ewe, light ... 15.00 to 15.00  
do. ewe, heavy and black ... 15.00 to 15.00  
do. ewe, light ... 14.00 to 15.00  
do. ewe, heavy and black ... 14.00 to 15.00  
do. off cars ... 18.75 to 19.00  
Lambs to \$2 on light or thin hogs; less \$3 to \$3.50 on heavy; less \$4 on stags; less \$5 to \$1 on hewers.

## R. O. P. CHAMPIONS

According to the R. O. P. reports a Jersey cow produced more butter fat during last year than any other cow of any other breed. We have now for sale Twenty Cows, fresh or spring fresh, all mentioned above. These are closely related to the champion butters mentioned above.

B. H. BULL & SON, BRAMPTON, ONT.

ADVERTISE in these popular columns, which others find so profitable—costs you only \$1.68 per inch.



## Without more labour at no added production cost

How yields of  
Potatoes were  
increased 20%  
per acre by practical  
growers who write  
these testimonials

"I wish to call your attention to the need of changing your seed potatoes at least every second year, by getting either Northern Ontario grown, or New Brunswick certified seed potatoes. By using NORTHERN GROWN seed potatoes, we can increase our yields of early potatoes at least 20 per cent."

Extract from Manager's Annual Report,  
Sarnia Vegetable Growers' Association.

"Last season we planted New Brunswick Irish Cobbiers and sold a considerable quantity of the same seed to neighboring farmers. In several instances we saw the product of this seed dug beside home-grown seed and in every case the NORTHERN GROWN seed yielded full 25 per cent. more."

W. J. OKE, Peterborough, Ont.

"Potato crops from NORTHERN GROWN seed are very profitable in our experience. Northern grown seed sprout earlier with a much heavier and stronger sprout. After planting they come up more evenly in rows. The potatoes when dug, give a more uniform potato which finds ready sale, with sometimes higher prices. I am satisfied we get from 20 to 25 per cent. more potatoes per acre with NORTHERN GROWN SEED—and we are using nothing else next year."

GUTHRIE BROS., R. R. 3, Sarnia, Ont.

"G. A. Williams, R. R. 5, Peterborough, Ontario, planted NORTHERN GROWN seed potatoes last year beside some home-grown seed. He got 464 bushels per acre from the former and 347 bushels per acre from the latter—a difference of 127 bushels. This Spring he is planting Northern Grown seed entirely."

"We have used NORTHERN GROWN seed potatoes either from the Red River district or from Northern Ontario since the summer of 1912, and the increased yield has more than paid for the cost of the seed. We sell all our own potatoes and plant nothing but NORTHERN GROWN seed."

G. BRIDGER & SONS, R. R. 1, Sarnia, Ont.

"I have used NORTHERN GROWN seed potatoes for several years and have always found them to do much better than home grown seed. They produce a heavier crop, sprout earlier and have stronger vitality. I am confident the actual increase in yields caused by the planting of Northern Grown seed has been at least 20 per cent."

HENRY BROUGHTON, Sarnia, Ont.

These results secured by practical growers are corroborated by scientific experiment. For five years seed potatoes from Northern Ontario, New Brunswick and Old Ontario have been planted side by side. In each year Northern Ontario seed has led with New Brunswick second, and Old Ontario seed in last place; the yields last year were 350, 318 and 220 bushels, respectively.

The reasons for this increase when NORTHERN GROWN seed is planted are:—(1) The climate in the North is better suited to the normal development of the potato, thus, engendering superior vitality; (2) The seed is immature, hence better for seeding purposes; (3) Serious hereditary diseases which have become prevalent in Old Ontario are, because of climatic conditions, hardly established at all.

These diseases—Mosaic, Leaf Roll, Curly Dwarf—cannot be treated nor yet controlled by selection in badly affected districts. They are not readily recognized without special training, but they steadily decrease crops. They are widely spread throughout Old Ontario. The safest policy is to plant Northern Grown seed, preferably from New Ontario; failing that from the Maritime Provinces.

### We Will Help Growers Locate Certified Seed

To encourage the growing of NORTHERN GROWN seed potatoes in Old Ontario is now the definite policy of the Ontario Department of Agriculture. Not much seed, unfortunately, can be secured from Northern Ontario for next spring's planting, but an ample supply is being provided for 1919.

Arrangements have been made, however, to put farmers and farmers' associations in touch with sellers of New Brunswick certified seed. This seed was inspected by Federal Government inspectors during the summer while in field condition, again in December in the bin, and will be inspected before loading. It is guaranteed to be reasonably free from disease and true to variety. It will be shipped when danger of frost injury in unheated cars is past. It may be purchased at the farmers' selling price in New Brunswick plus a flat commission of 10 cents per bag and freight charges.

### Orders Will Be Received For Car-Load Lots Only

Any wishing to avail themselves of this opportunity to buy the best NORTHERN GROWN seed at present available are advised to do so at once. Write the Office of the Commissioner, Ontario Department of Agriculture, Parliament Buildings, Toronto.

### DO YOU KNOW OF A FARM FOR SALE?

If so, let us know. It is expected that returns will be offered with some capital well wish to buy good farms in Old Ontario, conveniently located and at a reasonable price.

If you wish to sell your own farm kindly forward a complete description of it—the location (Township, concession and lot numbers), distance from church, school, post-office and nearest town, and the condition of the roads, nature and condition of soil, amount of drainage done and required, kind and condition of fences, number of acres and how cropped, noxious weeds prevalent, complete description of buildings and source and condition of well water. State sum for which you will sell.

Write at once to office of the Commissioner of Agriculture, Parliament Buildings, Toronto.

**Ontario Department of Agriculture**  
PARLIAMENT BUILDINGS, TORONTO

SIR WM. H. HEARST,  
Minister of Agriculture

DR. G. C. CREELMAN,  
Commissioner of Agriculture

