

Issued Each Week—Only One Dollar A Year

VOL. XXXI.

NUMBER 1

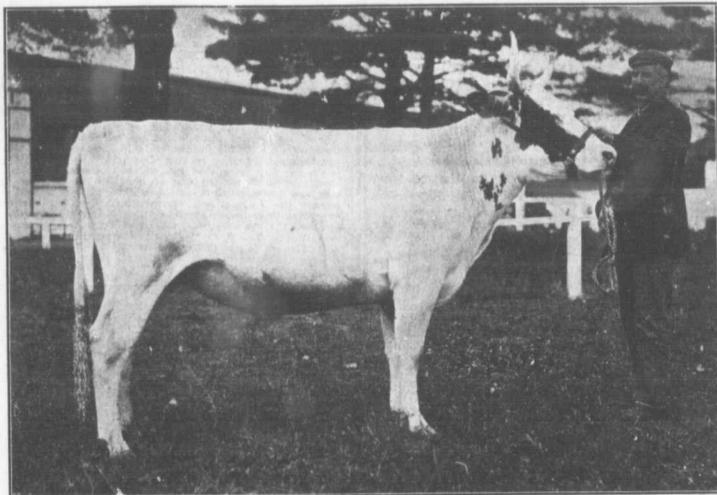
FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

JANUARY 4

1912.



CANADIAN BRED—A MODEL OF DAIRY AND AYRSHIRE BREED TYPE

White Legs of Menie—28,795—the heifer here illustrated, is possessed of the straight lines and stylish conformation that is characteristic of the best Ayrshires. She is also a study in correct dairy type; the great length, deep barrel, clean cut neck, great size, and yet withal fine quality of this animal being points that characterize the great animals of all dairy breeds. White Legs proved her excellence as an individual at Toronto Exhibition last fall, when she won first place in an open class of 24 choice two-year-olds, although she was not then in milk.

She was bred and is owned by Alex. Hume & Co., Menie, Ont.

DEVOTED TO
BETTER FARMING AND
CANADIAN COUNTRY LIFE

Not One Good Point But Many

Some makers of Cream Separators lay special stress on the **ONE STRONG POINT** in their machines, losing sight of the fact that they have weak points, and forgetting that no Cream Separator is stronger than its weakest part. A Separator that turns easy is of no particular merit if it is constantly getting out of order. A Separator that is easy to wash will not long remain in favor if it does not get all the cream out of the milk. It is not enough that a Separator have **ONE** good point. It must be good in **EVERY** particular.



Showing accessibility of gearing. Removing the body-housing, exposes the gearing and lower bearings.

Look at the good points of the 'SIMPLEX' LINK-BLADE SEPARATOR, with the SELF-BALANCING BOWL. IT GETS ALL THE FAT that can be obtained from the milk by any process. It is **Self-Balancing**, and does not cause trouble as other separators do by the bowl getting out of balance. It is the **LIGHTEST RUNNING**. It is the **SIMPLEST** machine, having the fewest parts, and will not get out of order like the more complicated machines do. It can skim cold or hot milk, and **WILL NOT CLOG UP**. In fact, it has **ALL** the latest features in Cream Separators, many of which belong exclusively to the 'SIMPLEX' machine.

That is why our machines are giving satisfaction wherever used. **THEY STAND THE TEST OF LONG, HARD USE.** We **GUARANTEE** them to give satisfaction.

Let us tell you more about them. Write for our Illustrated Booklet. It is free.

D. Derbyshire & Company

Head Office and Works: BROCKVILLE, ONT.

Branches: PETERBOROUGH, ONT. MONTREAL AND QUEBEC, P. Q.

WE WANT AGENTS IN A FEW UNREPRESENTED DISTRICTS

Enthusiasm

You Never Saw The Like of the enthusiasm of people who keep poultry.

They are wide-awake—open to learn. They read everything they can get that will in any way help them make more money.

Our people are not poultry fanciers. They

to keep poultry. 98% of them actually keep hens.

That's why we devote a whole page each week to poultry, and on Feb. 1st will publish

Our Fourth Annual Magazine Number Wholly Devoted to Poultry

While the enthusiasm of our people is highest over poultry—over what they are learning about it in our poultry special, have them meet your proposition. That will be the psychological moment, your opportune time to get next with your goods, for they will publish it now. Better reserve your special space to-day.

Advertising Department, **FARM & DAIRY** Peterboro, Ont.



INDIRECT TAXATION IS A TREMENDOUS BURDEN ON THE FARMER

While our cartoonist has not produced exactly our conception of a typical Canadian farmer, this illustration serves to show the real cause for the depopulation of our farming districts and the creation already of slums in our young Canadian cities. This burden of indirect taxation falls both on the producers on our farms and on the working classes in the cities. The greatest burden of all is the excessive increase of land values in our cities. This affects everybody. It enormously increases the cost of handling the products the farmer buys and sells and increases rents to the working classes. Excessive railway charges also increase the cost, not only of travelling, but of handling the goods farmers sell but none the less effectively, take from the farmer the greater part of the wealth he produces. This burden of indirect taxation is none the less real because most of us farmers do not understand its extent or how it is applied. Watch the articles now running in Farm and Dairy, dealing with these matters. They are of great importance to farmers.

A Talk on B. C. Dairying

"We have no excessive heat in British Columbia, and the nights are fine and cool, just as they are in Nova Scotia. The country is well watered, and the pastures are the best I have ever seen. As near as I can judge, British Columbia dairymen can pasture to advantage for eight months of the year. This year the cows were on grass until November 10th." In these words did Mr. Freeman Hoffer, a graduate of the Nova Scotia Agricultural College, who has spent several months in British Columbia as a dairy inspector, express his opinion of the possibilities of that province in dairying to an editor of Farm and Dairy.

"Dairymen there are growing a great deal of alfalfa and red clover. Alfalfa grows excellently. Two crops generally are cut. Very few dairy farmers have tried corn. At the Coquitlam Aylem Farm they are going to try it next year. The reason that the dairymen have not adopted corn and the silo is that mangels and turnips grow luxuriantly in that moist climate."

LAND VALUES A DETRIMENT

"The biggest objection that I see to dairying in British Columbia," continued our friend, "is that land is too high. In the Chilliwack district, for instance, land suitable for dairy farming is on the market at \$50 an acre. It looks to me as if real estate men had pushed land values too much altogether."

"In the neighborhood of Vancouver, land suitable for dairying is limited, and the price of dairy products is high. This might explain to a certain extent the abnormal prices asked for the land. The City Dairy at Van-

cover are now paying 50 cts. a pound butter fat for cream. Of course in the summer months prices will drop somewhat below this.

"As yet British Columbia dairymen are not supplying their own home market. Butter is being brought in from Washington and New Zealand. Excessive export rates make the price of Ontario butter almost prohibitive, although Alberta dairymen are developing a market in British Columbia."

"How about the buildings on your dairy farms?" we asked.

"Many dairy farmers are putting up good, up-to-date stables," was the reply. "At Coquitlam Aylem Farm they have a model stable. In fact this 1,000-acre farm is setting a splendid example to the dairy farmers of our province in up-to-date methods."

"And how about the price of feed?" we next asked.

"Feed is high. Oil meal is almost impossible to get at \$45 a ton, and bran sells for \$28. Of course dairy products sell for prices equally high."

WELL-BRED BULLS USED

Speaking of the dairy estate of the country, our friend said: "We have a pretty good line of dairy cattle in our western province. Here the grades predominate in the dairy districts. Many of the farmers are going in strongly for well bred, pure bred sires. They are proving themselves progressive dairymen."

"Of course dairying is only in its infancy. I was one of the first dairy inspectors in Record of Performance work in the province. The breeders of pure bred dairy cattle took right hold of the work and some of their cows are making excellent records."

Issued
Each Week

FARM AND DAIRY

RURAL HOME

Only \$1.00
a Year

Vol. XXXI.

FOR WEEK ENDING JANUARY 4, 1912.

No. 1

COTTONSEED MEAL AND DRIED BREWERS GRAINS FOR DAIRY COWS

Professor Geo. E. Day, O.A.C., Guelph, Ont.

Which of These Two Feeding Stuffs can Best be Purchased for Milk Production?—Their Value as Compared with Bran.—A Summary of Results of Careful Experimental Work.

IN these days of high-priced food stuffs for cattle, it is sometimes puzzling to know what food to buy to maintain the milk flow and at the same time keep the cost of the ration within reasonable bounds. During recent years there has been a considerable addition to the list of food stuffs which are ordinarily used in feeding dairy cows, and it is important that the dairyman should have some sort of definite knowledge regarding the foods which are offered him.



Prof. Geo. E. Day

Cottonseed meal has been used for a very considerable number of years for feeding dairy cows in this country, but, up to the past few years, only in very limited quantities. Late-ly, however, dealers have brought much larger quantities of cottonseed meal into this country, and more of this product has been fed owing to the fact that other foods are high in price.

BE SURE OF ANALYSIS
Cottonseed meal is undoubtedly an important addition to our dairy cattle foods, but it is important for the purchaser to remember that cottonseed meal varies more or less in composition, especially in regard to its protein and crude fibre. It follows, therefore, that all cottonseed meal is not worth the same price per ton, and it is a product which should always be bought under a guarantee as to its protein content. Professor Lindsey, of the Massachusetts Experiment Station, classifies cottonseed meal as follows:

	CRUDE PROTEIN	FAT	CRUDE FIBRE
High-grade	41-46%	8-10%	7%
Medium-grade	36-41%	7-9%	8%
Low-grade	24%	5-6%	18%

From the classification just given, it will be seen that there is possibility for an extremely wide variation in protein content, and also a very wide variation in the fibre. The fibre in a food re-

duces its value, for the reason that it requires considerable energy to digest the fibre and leaves less of the nutriment of the food for productive purposes.

In order to secure more information regarding cottonseed meal, we have conducted some experiments in which cottonseed meal was compared with Bran, a food which is perhaps more generally well known than almost any other food for dairy cattle.

CONDITIONS OF THE EXPERIMENT
In our comparison we used as our basal meal ration Molac Dairy Feed, a product somewhat similar in composition to bran, but rather more palatable owing to the fact that it contains a certain amount of molasses. During part of the test we added to the Molac an equal weight of bran, and owing to the fact that cottonseed meal

meal was fed only half as much cottonseed meal as bran was used.

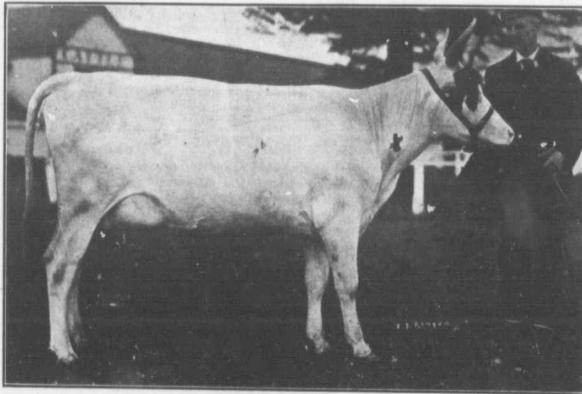
The cottonseed meal used in this experiment showed the following composition, according to the analysis made in our Chemical Laboratory: Protein, 35.5 per cent; fat, 10.6; fibre, 14.8. According to this analysis, therefore, the cottonseed meal that we used came very near the boundary between medium and low-grade cottonseed meal, according to Lindsey's classification. It contained rather more than twice as much protein as the general run of Bran, but the crude fibre was also higher than that contained in bran, which would help to bring the two foods a little closer together.

HOW THEY WERE FED

In making our comparison, 11 cows were used. They were fed two weeks on a mixture of bran and Molac, then two weeks on cottonseed meal and Molac, followed by another two weeks' period on bran and Molac. For purposes of comparison, only the second week in each period is used, so that the cows would have a week to become accustomed to the change in feed, and the influence of one period of feeding could not be said to affect the results of another period.

The average of the two periods when bran and Molac were fed is compared with the period when cottonseed meal and Molac were fed.

The comparison of these two foods may be better brought out by giving the milk produced by each cow on the two foods, because in this way we are in a better position to see whether there is any constancy in the comparison so far as individual cows are concerned. The following table shows the average milk produced by each cow during the second week periods of the bran and Molac and the second week period on cotton seed meal and Molac:



The Kind of Ayrshire that Canadian Stockmen are Breeding

June Morning—21.167—the heifer here illustrated, bred and owned by Alex. Hume, Memie, Ont., was first in the class for two-year-old heifers at the Western Fair at London last fall. Note the uniform conformation, good udder and teats, fine head and expression and the clean-cut throat of this heifer. She is a kind we need more of.

is so much richer in protein than bran we used only half as much cottonseed meal as we used bran. For instance, when we used bran, some of the cows received four pounds of bran and four pounds of Molac per day, but when we used cottonseed meal the ration consisted of two pounds of cottonseed meal and four pounds of Molac. The amount of meal varied with different cows, depending upon the amount of milk they were giving, but in all cases Bran and Molac were fed in equal quantities by weight, and when cottonseed

Cow No.	Bran and Molac		Cottonseed	
	lbs. milk	lbs. milk	lbs. milk	lbs. milk
110	27.5	32.1	27.5	32.1
111	29.5	32.9	29.5	32.9
112	19.6	20.5	19.6	20.5
113	24.0	24.0	24.0	24.0
114	10.6	10.6	10.6	10.6
117	126.5	161	126.5	161
118	126.5	161	126.5	161
119	126.5	161	126.5	161
120	126.5	161	126.5	161
142	126.5	161	126.5	161
143	114	117	114	117
144	126.5	161	126.5	161
149	200.5	190	200.5	190
	2,225	2,265	2,225	2,265

(Concluded on page 4)

TWO DELUSIONS---HOW THE INTERESTS SQUEEZE THE FARMER

Article 5.

BEFORE attempting to explain the real reason why farming is not more profitable, and why approximately 100,000 farmers have left the farms of Old Ontario during the past ten years, it is necessary that some common fallacies shall be exposed. These fallacies are used by "the interests" that are preying on our farmers, and on the working classes generally, as a cloak under which they are able to carry on their operations in secret. The first of these fallacies is preached by many government officials, college professors and agriculturists' papers. They assert, with the best of intentions, that the real reason we farmers are not making more money out of our farms is because we are not using modern, scientific methods of farm practice. They contend that if we would only sow better seed, underdrain our low lands, cultivate thoroughly, prune and spray our orchards, weed out our inferior dairy animals, and so forth, we would so greatly increase the productivity of our farms we would soon be well-to-do. The second fallacy is contained in the charge that the middlemen take too large a portion of the proceeds for which our farm produce is finally sold and that they are growing fat on our expense.

Both of the foregoing contentions contain an element of truth. It is the portion of truth they contain which makes them most dangerous. Without it they would not have received the general acceptance that they have. Without it also the great "financial interests," who are holding us all up by their own advantage would not be able to use both fallacies, as effectively as they do, to cover up their tracks.

WHERE MODERN METHODS FAIL

Farm and Dairy believes in and admires the splendid work that our government officials, agricultural colleges and experiment stations are doing. We believe that we farmers should adopt more generally than we have many of the modern methods of farm practice which they advocate. We believe that it is in the best interests of the country that we should do so. We believe that individually doing. We feel that we can scarcely emphasize the returns from our farms by so. We purpose continuing to do so. The fact, however, that we believe in the adoption of modern methods of farm practice, does not blind us to an even greater fact: That is, that under existing economic conditions they have no power to make farming on the average any more profitable than it is to-day. We go further: We venture to say that even if every farmer in Ontario were to adopt all the modern methods of farm practice that have been proved to be successful and we were thereby enabled to treble the output of the farms of the province, we farmers on the average would have no more to show for it at the end of each year than we now have. By means which we do not understand, but which we are beginning to realize somehow exist, the increased wealth we thus might create—as has followed the introduction of modern inventions, see Article 4—would be niched from us. It would flow into the already over-flowing coffers of the great "financial interests." It would help to make a few more millionaires and multi-millionaires. It would, inversely, also increase the depopulation of our rural districts by intensifying our dissatisfaction with rural conditions. It would enlarge the area of our city slums and increase the difficulty of dealing with them.

In a time of war a powerful enemy is always the most dangerous when it is able to conceal its location, and its methods of operation. Under such conditions those scouts who cry out that the enemy is here or there when such is not the case, or when it is true of only an insignificant portion of the enemy, thereby work injury to their own side. They create confusion and thus divert attention from the real sources of danger. Thus it is with those who declaim that the reason farming is not more profitable is because we farmers generally are not more progressive in our methods, and also with those who blame the middlemen for doing things which, for the most part, are not grounded on fact. The truth is, the vast majority of the middlemen are suffering from the same economic conditions that are bearing so heavily on our farmers and on the laboring classes generally.

HOW IT IS DONE

Concealed in ways which are being revealed more clearly every day, what—for lack of a better term—can best be termed the "financial interests"—have the rest of the community by the throat. They have acquired the ownership of our great natural resources, such as our coal, iron and steel mines, our timber limits and water powers. They control our great railway and steamship lines and express companies. The land in our cities, which are our great trading centers, is owned by individuals and is held at enormous values thus vastly increasing the cost of doing business. By means of the protection afforded by our tariff walls this same class of "financial interests" has formed combines and mergers and thereby has been enabled to advance the price of practically everything the farmer and the laboring classes have to buy. Thus it is that the "financial interests" are enabled to squeeze all other classes of the community. Thus, also, while those farmers who are the first to adopt modern methods of farm practice reap a distinct advantage by so doing, they lose their advantage as soon as the majority of farmers follow their example: For then the "financial interests" decide that as the farmers are becoming prosperous it is time for them to make another squeeze. They make it. They advance the prices of those things we farmers buy. Our railway companies cut a few more "melons." The land speculators advance by millions of dollars the value of the land in our cities, thereby increasing the cost to the middlemen of handling our products. It is in such ways as these that we have taken from us the increased wealth we create. This explains also why it is that a period of hard times always follows close on the heels of a few years of good times. The public is then being over-squeezed.

There is only one remedy. We farmers must cease to expect relief through dependence on the reading of our political papers. Often they are controlled more or less directly by the "financial interests." Nor must we rely on either of our great political parties. Instead, we must study these questions for ourselves. Then we must act for ourselves. Fortunately we have the power to apply the remedy as soon as we understand the nature of the disease.

A Comparison of Cottonseed Meal and Brewers' Grains

(Continued from page 3)

The results show marked uniformity. Only four of the cows gave more milk on the bran and Molac ration than on cottonseed meal and Molac, and the difference was very slight in each case,

being no greater, in fact, than might have occurred had the rations been identical. The remaining seven cows did better upon the cottonseed meal ration, and here the differences were rather greater, though the total shows only 40 lbs. difference in favor of the cottonseed meal.

So far as this test is concerned, therefore, the

cottonseed meal proved slightly more valuable than twice its weight of bran, and since cottonseed meal can be bought for less than twice the price of bran, it materially helped in reducing the cost of the ration. The higher grades of cottonseed meal would, of course, be worth more than the grade which was used in this experiment, but this experiment shows that even the lower grades of cottonseed meal can be used to good advantage when bran is high in price.

A TEST OF BREWERS' GRAINS

Another product which has lately assumed some prominence in this country is dried brewers' grains. This product is also subject to fluctuations in composition and should be purchased under guarantee as to composition. In order to obtain some further information regarding this product, we used the same 11 cows that were used in the cottonseed meal experiment to compare the dried brewers' grains with bran. In this case, Molac was also fed with the bran and with the dried brewers' grains.

The sample of dried brewers' grains that we used in this experiment showed the following analysis: Protein, 20.3 per cent; fat, 6.12; crude fibre, 18.8. Wheat bran shows an average analysis about as follows: Protein, 15.4 per cent; fat, 4; crude fibre, 9.

It will be seen, therefore, that the brewers' grains are much lower in protein than cottonseed meal and belong more nearly to the same class as bran. Brewers' grains contain more protein than bran, but they also contain about twice as much fibre, which is a disadvantage; so that while one would expect the brewers' grains to have some advantage over bran, at the same time the difference would not likely be very great. In comparing brewers' grains with bran, therefore, we used as much brewers' grains as we used bran, and the bran and brewers' grains were combined with an equal weight of Molac. The weekly production of the cows on these two foods, according to the plan previously described, was as follows:

Cow No.	Dried brewers' Grains		Bran and Molac	
	Lbs. milk	204	Lbs. milk	204
110	228	242	228	242
111	207	216	207	216
112	228	242	228	242
113	207	216	207	216
114	228	242	228	242
115	207	216	207	216
116	228	242	228	242
117	207	216	207	216
118	228	242	228	242
119	207	216	207	216
120	228	242	228	242
121	207	216	207	216
122	228	242	228	242
123	207	216	207	216
124	228	242	228	242
125	207	216	207	216
126	228	242	228	242
127	207	216	207	216
128	228	242	228	242
129	207	216	207	216
130	228	242	228	242
131	207	216	207	216
132	228	242	228	242
133	207	216	207	216
134	228	242	228	242
135	207	216	207	216
136	228	242	228	242
137	207	216	207	216
138	228	242	228	242
139	207	216	207	216
140	228	242	228	242
141	207	216	207	216
142	228	242	228	242
143	207	216	207	216
144	228	242	228	242
145	207	216	207	216
146	228	242	228	242
147	207	216	207	216
148	228	242	228	242
149	207	216	207	216
	2,177.5	2,254	2,177.5	2,254

The results of this test are pretty much what one would expect from the composition of the two foods, there being a slight advantage in favor of the dried brewers' grains. The advantage, however, is very slight, amounting to only a little over three per cent. It is worthy of note that only two cows gave more milk on bran than on brewers' grains, and that there is remarkable uniformity throughout in the milk production.

BREWERS' GRAINS AND BEAN BUTYR

It is worthy of note in connection with this matter that other analysis of dried brewers' grains do not show such a high percentage of protein, so that it would appear, both from the composition of the foods as well as the results in milk production, that dried brewers' grains and bran are practically equal in value.

It is especially important in connection with foods of this kind that the purchaser should have a guarantee as to composition. This point has been mentioned before, but it is of such great importance that we would like to emphasize it once more.

Painting wounds on fruit trees is easier than covering with grafting wax and just as good. Linseed oil and white lead, two coats a few days apart, we have found to give good satisfaction. —A. McNeil, Fruit Division, Ottawa.

Does it Pay to Fertilize Corn?

T. Walter Shipley, York Co., Ont.

Does it pay to fertilize corn? This question was asked in a recent issue of Farm and Dairy by a subscriber. We venture the opinion, based upon the results of experiments conducted both in Canada and other countries, that it not only pays to fertilize corn, but also that it pays to fertilize it very liberally.

Under average conditions, the fertilizer gives profitable returns from its application to the fodder crop and also has a marked beneficial "after-effect" on the two succeeding crops—usually grain sowed down to clover and timothy. In the limited space of this article it is only possible to cite one or two instances of the profits derived from the judicious use of fertilizers on this crop.

A FARMER'S EXPERIMENT

To take a recent experiment: Messrs. Belyea Bros., Oakville, Ont., conducted an experiment on corn, the plan being as follows: Plot 1—Unfertilized (check plot). Plot 2—140 lbs. nitrate of soda, 400 lbs. acid phosphate, 140 lbs. muriate of potash per acre. Plot 3—140 lbs. nitrate of soda, 400 lbs. acid phosphate per acre. The cost of the fertilizer per acre on plot 2 was \$11.70, and on plot 3 \$8.20.

The yields obtained, calculated per acre, from the three plots, were: Plot 1—20,160 lbs. of green corn. Plot 2—41,760 lbs.; increase, 21,600 lbs. Plot 3—33,600 lbs.; increase, 13,500 lbs.

Taking Mr. Belyea's price of \$5 a ton, we find the increase on plot 2 was worth \$54, and on plot 3 \$33.80. If we deduct the whole cost of the fertilizer, part of which should be charged to the two succeeding crops, there is a profit per acre on plot 2 of \$42.30, and on plot 3 of \$25.60. The photographs of this experiment, taken rather early in the season, show quite a difference in growth. The difference at harvesting was even more marked.

WHAT THEY SAY

The following remarks of the experimenters need no further comment: "During the whole of the growing season the superiority of the fertilized plots over the unfertilized was plainly evident. The cobs on the 'complete fertilizer' plot were much larger and more numerous than on the others. A medium dressing of barnyard manure was applied equally to all three plots."

The remarks of another farmer, Mr. C. J. Appelle of Bronte, Ont., with reference to the "after-effects" of fertilizers, are worth quoting. He says: "The corn did well. In barley and oats

following there was a marked difference. They came up first, held their color and have kept ahead of the balance of the crop."

Other examples could be given. It is hoped that the results obtained by these farmers will be an incentive to other men to prove for themselves that the judicious application of fertilizers is profitable. It is interesting to note that the farmers of the United States spend annually hundreds of thousands of dollars on fertilizers for



Does it Pay to Fertilize Corn? The Unfertilized Plot

their corn crop. This fact alone seems to us positive enough proof that they find the investment profitable, else why would they do it?

Why cannot agricultural societies take up the work of introducing pure bred dairy sires in dairy districts? In Nova Scotia pure bred live stock is being introduced mainly through the efforts of the agricultural societies, and their work



The Result of Applying 680 lbs. of Complete Fertilizer

These two illustrations show the difference in growth between two plots of corn on the farm of Belyea Bros., Oakville, Ont. The fertilizer applied to Plot 2 cost \$11.70 and the increased yield of corn valued at \$5 a ton was worth \$54. For fuller information about this experiment read the article adjoining.

is bringing much greater results than were their money and effort spent on an annual fair. Many of our agricultural societies in Ontario are little more than fair associations. As such they cannot exist much longer. As pure bred live stock associations, however, there is a long and useful life ahead of these societies. Several societies in the western portion of Ontario have gotten their eyes opened to this fact.—E. I. Bright, York Co., Ont.

Raising Calves Without Skim Milk

Parnham Allison, Dundas Co., Ont.

As we ship our milk to Montreal we lose what I consider one of the best feeds for calves after they are one month old, and that is skim milk. But as we have not skim milk we get the next best thing. We feed our heifer calves new milk, and nothing else until they are about a month old. Then we begin to lessen their milk and feed them a little oilcake and bran. As soon as they will begin to eat it we give them some hay and ensilage.

The older the calves are the less milk we give them, and the more of the other feeds until they are about four months old, when we quit the milk altogether and give, in addition to the other feeds, some peas, oats and barley, ground.

We find that, with this method, we can develop a good, big, vigorous calf in good condition and at the same time not too fat. I think that a moderate amount of ensilage is as good a thing as we can feed a calf after it is six or eight weeks old, as they are very fond of it, and it helps give them good digestive capacity. We have tried several prepared calf meals, but find bran and oilcake more satisfactory and economical.

The main points in raising dairy heifer calves is to give them plenty of fresh air and exercise, and such feeds as will develop lots of bone and muscle and good digestive capacity.

Dry Farming Conditions in Ontario

The amount of rainfall in Ontario from April to May of 1911 was 7.7 inches. The normal rainfall is 9.0 inches. The difference between 7.7 and 9.0 inches of rain made a difference between good crops and a crop failure. There is no reason, however, why with only 7.7 inches of rain, we in Ontario should not have good crops. Speaking at a meeting of the Guelph Winter Fair, Alfred Atkinson, Professor of Agronomy at the University of Montana, stated that in Montana, their rainfall from April to August last year was 7.9 inches, and that it had been a normal season. By practising the same methods in Ontario that are practised in Montana for conservation of soil moisture, we could grow just as good crops in a year of light rainfall as they do.

Fall plowing in Montana is universal. The land is harrowed in the spring as soon as a team can be got on it, and is harrowed after each rainfall until a crop is in the ground. Such treatment reduces loss of moisture by evaporation to a minimum. Mr. Atkinson cited an experiment made by Professor King, of Wisconsin, in which a field was harrowed as quickly as possible in the spring and another part of the field a week later. There was no appreciable loss of moisture from the first part of the field, but from the unharrowed portion there was a loss of one and three-quarter inches of moisture in the one week. The harrowed portion of the field was also 10 degrees colder.

Professor Atkinson made a strong point of advocating that rolling should not be the last operation in the preparation of the seed bed. Rolled land is in ideal condition for the escape of moisture by evaporation.

When buying feed we always consider the amount of fertilizer that the feed will bring to the soil. Oil meal, cotton meal, and bran all contain a large proportion of nitrogen, potash, and phosphoric acid.—E. F. Eaton, Colchester Co., N.S.

We are fortunate in the three prairie provinces in that there are no taxes on farm improvements for municipal purposes. He would be a bold individual who would advocate a return to the old system which still prevails in Ontario and many other parts of the world of taxing the farmer on his barns, plows, stock, etc., for municipal purposes.—F. J. Dixon, Manitoba.



J. B. HOGATE

Weston, Ont. Brandon, Man.

Importing Barns

J. B. HOGATE, Prop.

Direct Importer of

Percheron Stallions and Fillies, Clydesdales and Shire Stallions. Fifty head to select from, the best that money could buy, Percherons in Blacks and Greys. Weights of Stallions from 1700 to 2200 lbs. Mares from 1600 to 1900 lbs.; some safe in foal. No reasonable offer will be refused.

Terms to Suit Purchaser

For further particulars write:

J. B. HOGATE
WEST TORONTO - ONT.



"Metallic Rock Faced Siding Makes a Frame House Look Like Stone"

You can have any brick or stone design, and when in place Metallic Brick or Rock Faced Siding cannot be distinguished from genuine brick or stone. It is perfectly weatherproof—keeps a house warm in winter and cool in summer, and is fire and lightning proof. Our Metallic Siding can be laid quickly and easily entirely by yourself, and is very durable—will last a lifetime.

"No wonder Metallic Rock Faced Siding is popular—it waters well, looks well, and is so economical. A handsome home can be had for a small outlay."

The Philosopher of Metal-Town

Write us for full information and suggestions for artistic homes.

PHONE PARK 800

MANUFACTURERS

1743

The **Metallic Roofing Co.** Limited
TORONTO & WINNIPEG

Are you anxious to save Time and Money on the Work you are doing on your Farm at present and to get Larger Crops from your Farm or Orchard? If so, let us send you Free of Charge our Pamphlets on the use of

STUMPING POWDERS

—USED FOR—

REMOVING STUMPS AND BOULDERS
DIGGING WELLS AND DITCHES
PLANTING AND CULTIVATING ORCHARDS
BREAKING HARD PAN, SHALE or CLAY SUBSOILS, Etc., Etc.

Figure yourself what Clearing your Farm is costing now or what you are losing in crops through not clearing

Write Us About Arranging Demonstrations

CANADIAN EXPLOSIVES, LIMITED
MONTREAL, P. Q.

It is desirable to mention the name of this publication when writing to advertisers

FARM MANAGEMENT

"Five Profit" Crops

Prof. W. C. Palmer, N. Dakota Agr. College

Corn, alfalfa and clover are "five profit" crops. In other words, they will give five profits when wheat gives one. And wheat cannot give that one unless helped out by corn, alfalfa or clover. The five profits are: 1. The crop. 2. Preparation of the land for a crop of grain and the assurance of a crop fit grain. 3. The milk, butter, beef, eggs, pork or horse power that these crops can be manufactured into. 4. The manure. 5. Distributing the income and work.

1. The crops of corn, alfalfa or clover will bring as much profit as the crop of grain. They are much more sure of making a crop. This makes them more profitable than the grain crops.

2. Preparation of the land: These crops prepare the land for a crop of grain. The cultivation given the corn saves moisture, kills weeds and plant diseases, leaving the land in condition to double the profit from the grain crop. It takes 12 to 13 bushels of wheat to pay for raising the crop. When 12 bushel crop just pays for its raising, a 14 bushel crop leaves two bushel for profit. A 16 bushel crop leaves four bushels for profit or twice as much as the 12 bushel crop. An 18 bushel crop will leave three times as much profit and so on. That is not all that the preparation will do; it also goes a long way toward ensuring a crop of grain in case the season should be unfavorable. Alfalfa and clover enrich the soil in humus and nitrogen, things a soil must have to be fertile. Alfalfa also kills weeds and plant diseases. Corn, alfalfa and clover do the greatest good when they are grown in rotation with the grain crop. The corn will help the alfalfa, clover and grain and these in turn will help the corn and grain.

3. Milk, butter, beef, eggs, pork or horse power; whichever of these the horse power, or clover is manufactured into, a profit results, and usually a good one—a profit that is the most independent of the seasons and of any other industry on the farm. The labor required in this manufacturing process is usually work that would not otherwise be utilized during the greater part of the year. Most businesses cannot succeed if their plants are lying idle most of the year with labor unemployed. The grain farmer has his equipment and labor idle more than half the year. This could be employed in manufacturing, as above outlined, in a most profitable way.

4. Manure: When corn, alfalfa, clover and other food products are fed to stock they return four-fifths of its plant food in the manure. This has a money value that is greater than the profit from the average crop of wheat.

5. Distributes income and work: This means that there is money coming in at all times of the year. This makes it possible to buy for cash instead of being trusted till threshing time, which some years does not come. Buying for cash ensures lower prices than buying on time. It also makes it easier to get things when having them charged than when paying cash. When on the book the farmer is under obligations to the merchant; he is no longer the independent farmer. The corn, alfalfa and clover distribute the work over a longer season, making it possible to secure cheaper and more efficient help. The good laborer wants steady work. These two advantages mean another profit.

Does what give one profit? Some years it does and other years? It just

lays down—gives up—leaves the farmer with a great big loss that he will take several weeks of profit to make up for. Wheat does not pay the mortgage—it usually makes it. Corn, alfalfa, clover, cows and hogs pay the mortgage. They break up wheat so that it does not get up so easily in the face of an unfavorable season. Corn is King and alfalfa Queen, while wheat is a most lacking nerve. When all goes well it is not lacking things are unfavorable it lays down—corn and alfalfa plug along making a crop and they are "five profit" crops and without them wheat becomes a "no profit" crop.

An Ice House at Little Cost

An inexpensive ice house which will give good satisfaction can be constructed as follows: As a site for the structure choose a well sheltered location convenient to the place where the bulk of the ice will be used during the season. If the area is not well drained naturally, grade the surface so that no surface water can ever flow into or through the building and so that the water from the melting of the ice will be quickly disposed of. In some instances it may be necessary to provide tile drains laid 15 or 18 inches below the surface to care for this water. Having properly provided against water, both from without and from within the ice house, set a line of squared or flattened poles four feet apart, so as to form a square of the dimensions desired. The height of the poles should be the same as the length of the side of the square, if the greatest economy of space and the best storing conditions for the ice are desired, i.e., a 14 bushel square should be 14 feet high. A house of this size will provide storage for a cube of ice 11 by 11 by 11 feet, which will allow for a 10 per cent equivalent to about 38 tons. (A cubic foot of ice weighs approximately 58 pounds, and one ton of ice occupies nearly 35 cubic feet.)

EASY TO CONSTRUCT
To complete the ice house, cut the posts to a uniform height and nail a double two by four inch or two by six inch plate on top of them. The sides may be inclosed by boarding both sides and outside with rough lumber. To give a neat outside appearance, the inside boards may be planed and ship-lapped, or ship-lapped siding may be placed over the rough sheathing. The space between the two board walls may or may not be packed with shaving or sawdust. If packed, the packing material should be perfectly dry. The roof may be a simple even-span one-third pitch roof, with the gables boarded up.

In order that the house may be filled without unnecessary labor a convenient door should be provided in the middle one end. The door should be made in two or three sections, and as the house is filled loose plans of proper length should be at hand to insure the opening of the door to hold the packing material in place as the heap of ice heighens. The ice must be placed on a bed of sawdust, shavings, or other packing material at least one inch deep, and the rick of ice should not approach the side walls closer than 15 or 18 inches, the intervening space being filled with packing material rammed in.

Good intentions are worthless unless combined with intelligence, thrift and practical ability.

BARLEY in most sections is not fit for seed this year. My 20 acre crop of O. A. C. No. 21

Barley is first-class seed. It averaged 47 bushels to the acre. If good seed and the best in barley appeals to you, write me at once for prices. Satisfaction, or your money back.

H. R. NIXON, ST. GEORGE, ONT.

Janua
The
The
use
of
interest
tions,
All
atten
Gr
I ha
six we
meat i
at lea
if some
of the
of the
The c
ota or
for the
rest, r
food f
moved
tein con
at lea
that w
moved.
tein, an
Mr. J
tion a
trated,
I produ
large m
aning g
that con
we alrea
An ex
in which
corn me
with ski
ed that
gain in
2 1/2 ct.
with c
with a
practice
heavy fo
logical
better fo
ration.
Too Mu
Farm
fod entir
positive
often les
its work
remember
inflates I
placed, a
stantly f
cogical w
ten?
Heaves
horse, is
too large
and othe
often due
of bulky
cal injur
excessive
that shou
A hors
more wor

The Feeders' Corner

The Feeders' Corner is for the use of our subscribers. Any interested are invited to ask questions or send items of interest. All questions will receive prompt attention.

Grain Feed for Calves

I have a bunch of calves from four to six weeks old to which I am feeding oilmeal in addition to skimilk. Oilmeal is very expensive, and I would like to know if some of the cheaper foods that we grow at home could be substituted for it in the form of grain.

The cheaper grains, such as a part of oats or corn meal, can be substituted for the oilmeal with as good, or better, results. Whole milk is the ideal food for calves. When the fat is removed the skimilk has a higher protein content than the whole milk. What we need, therefore, is some meal that will take the place of the fat removed. Oilmeal is very rich in protein, and, therefore, instead of bal-

ancing up the skimilk it adds to that constituent of the food of which we already have too much.

An experiment at the Iowa Station in which oilmeal, ground oats and corn meal were fed in combination with skimilk to young calves showed that the cost of feed per pound of gain in the case of the oilmeal was 2.2 cts.; with oatmeal, 2.1 cts.; and with cornmeal, fed in combination with a little fax seed, 2.2 cts. The practice of feeding oilmeal and other heavy feeds to young calves is not logical; the cheaper grains are much better for supplementing the skimilk ration.



Glenhurst Flossie, an Ayrshire of the Producing Kind

Mr. Jas. Beening of Williamstown, Ontario, has achieved an enviable reputation as a breeder of producing Ayrshires. Glenhurst Flossie, the cow here illustrated, is of true Ayrshire type and a great producer. Note the constitution and the large middle and well shaped udder.

Where do we Stand?

Farming is now considered as a business. To be successful as a business man, the farmer must adopt business principles. He should know the cost of production of the various farm products, and which products can be grown and sold at the greatest net profit and with the least draft on the resources of his farm. He should know what he has invested in his business, and the rate of interest his investment is paying; also whether he himself is earning anything, or whether

his income is earned altogether by his money. If the latter, he may as well invest his money in six per cent mortgages and take it easy himself.

The only way to learn these facts is to take an inventory of the farm and equipment; start a simple accounting system, carrying it through the year, and taking a balance at the close of the year. The accounting system need not be complex, nor the labor exacting. January let to April let is a good time to take an inventory, as the stock is at its lowest usually during that season. There are many simple forms of accounting suitable to the farmer's needs, any one of which forms may be used.

The winter season offers many spare moments for studying these systems and putting one of them into use. Why not utilize the moments, and do something that will be useful and at the same time add to the knowledge of the farm business? Often a grown son or daughter may be induced to become the accountant, thus getting a good business training and improving the mind at the same time. And it is surprising how much use will be made of the facts recorded, when once available.

If the farmers of the United States would try to make each cow in their herds produce one pound more of butter fat, one year than the year before, the increase would amount to 22,000,000 pounds of butter fat a year and would increase the incomes of the farmers of this country \$7,000,000.—Secretary Wilson, U. S. Dept. of Agr.

BARTLETT'S "FARMER BRAND" FANCY CHOICE COTTON SEED MEAL

Has no equal as a Milk or Flesh Producer

It's the cheapest source of Protein known to Feeding Science, which is available as cattle feed. Therefore, it is the most economical food on earth for milk or flesh production.

MILK AND MEAT

can be produced only by Protein. No other food constituent can produce either milk or meat. Without a certain amount of Protein in the feed, the cow could not live; without the amount of it in the feed necessary to balance the ration properly, she cannot produce a maximum flow of milk. That is why in a great many cases

"FARMER BRAND" DOUBLES THE MILK

All feeds contain some protein, but most of them contain too little. Your ordinary home-grown feeds lack protein and will not produce a maximum flow of milk. They must be supplemented or "balanced" by Protein, in order to get the largest amount of milk for the least money.

BEWARE OF CHEAP MEALS

Be sure you get the genuine "Farmer Brand" Cotton Seed Meal, with the yellow tag bearing our name and the guaranteed analysis:
 Protein 48 to 48 per cent.
 Fat of Oil 7 to 12 per cent.
 Crude Fiber 10 to 13 per cent.
 Cheap meals analysing only 25 per cent to 35 per cent of sometimes 25 per cent, are being put on the market at \$25.00 to \$30.00 per ton. A little consultation with paper and pencil will readily show you that a pound of Protein is cheaper in "Farmer Brand" than in any of these substitutes, and at the same time you are getting

A STRICTLY PURE, HARMLESS FEED

at a cost that is a dollar or two per ton more. "Farmer Brand" is guaranteed as represented or your money back.

OF COURSE YOU WANT TO TRY IT

We have therefore made arrangements to supply you from shipping stations in Ontario, and save long freight hauls and customs duties. We will ship any amount from 1 bag up, at the following prices:

1 ton or more	\$3.00 per ton.	F. o. b. Kingston, Peterboro or Toronto.
Half-ton lot	16.50	47.50
50-lb. lot	9.00	9.00
Smaller lot	2.00 per cwt.	5.00 per cwt.

TERMS—Cash with Order. Shipment—Immediately on receipt of order. Send check for trial order today.

THE BARTLETT COMPANY Dept. H. 408-10 Hammond Bldg. DETROIT MICHIGAN

ancing up the skimilk it adds to that constituent of the food of which we already have too much.

An experiment at the Iowa Station in which oilmeal, ground oats and corn meal were fed in combination with skimilk to young calves showed that the cost of feed per pound of gain in the case of the oilmeal was 2.2 cts.; with oatmeal, 2.1 cts.; and with cornmeal, fed in combination with a little fax seed, 2.2 cts. The practice of feeding oilmeal and other heavy feeds to young calves is not logical; the cheaper grains are much better for supplementing the skimilk ration.

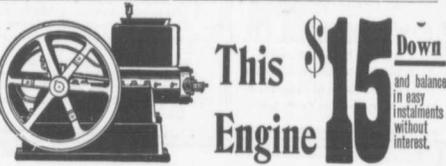
Too Much Hay Injurious to Horses

Farm horses as a general rule are fed entirely too much hay. This is a positive injury to the animal, and often lessens to a considerable degree its working efficiency. It should be remembered that every time a horse inflates his lungs, the stomach is displaced, and if this organ be kept constantly full of bulky food, it imposes extra work upon the respiratory system.

Heaves, so common among farm horses, is almost wholly due to feeding too large quantities of hay. Colic and other forms of indigestion are often due to feeding too large amounts of bulky food. Aside from its physical injury to the horse, the feeding of excessive amounts of hay is a waste that should be conserved.

HOW MUCH TO FEED

A horse weighing 1,000 lbs. will do more work and keep in better health



This Engine

Down and balance in easy instalments without interest.

IT IS EASY TO BUY

the wonderful Gilson "Goes Like Sixty" Gasoline Engine on the above plan. Powerful, simple, durable, dependable cheapest running, easiest to operate of any satisfactory, had subject to your shipping directions, and we will return every cent of your first payment. Can anything be better? In Canada—no doubt—no place has 30,000 satisfied users, proving that it is not an experiment but a tried and tested engine. Ask your banker about our reliability-founded 1860. Tell us just what work you have for an engine to do and we will name you price and terms on the proper horse power. All sizes. Send for free catalogue. Big money for Agents—write for our proposition.

GILSON MFG. CO., LTD.
161 York Street, Guelph, Ontario Canada.

Heaves of Three Years' Standing Completely Cured by Fleming's Tonic Heave Remedy

So says Mr. H. B. Burkholder, Lillooet, B. C., writing about Fleming's Tonic Heave Remedy, and adds, "I also find it the best condition powder I ever used." Heaves is not, as commonly supposed, a disease of lungs or air passages. It is due to stomach trouble, which, through the close nerve connection, causes a contraction of the lung tissues and, above all, breathing.

Fleming's Tonic Heave Remedy corrects the stomach trouble, and tones up the whole system. Its cause, g. n., the heaving, is cured, and, as a general condition powder, Fleming's Tonic Heave Remedy has few, if any, equals. Sent, postpaid, for \$1.00 per package.

Fleming's Lump Jaw Cure—This successful Lump Jaw Cure—today—

Fleming's Spavin Cure—(Lump) Cure soft and semi-solid blemishes without scarring.

Fleming's Hinde and Pull Evil Cure—cures all animals to readily cure cases considered incurable.

Fleming's Spavin and Ringbone Paste—one or two applications cure cases of years' standing.

If—no one of Fleming's Remedies fail to cure we will return your money—you be to the judge and your word to go.

Fleming Bros, Chemists, 63 Church Street, Toronto.

We believe this is the best book ever printed for the distribution. It covers over 100 Veterinary subjects, telling plainly how to recognize the various diseases and describe them to your clients.

It is free for the asking—write us for copy 6

Fleming's Veterinary Adviser

Sold Over 850,000 Acres
in Five Years

WESTERN LAND FOR SALE

In areas to suit purchasers
from 160 acres upwards, situated
on or near railways in the

Best Wheat, Oat and
Stock - Growing
Districts of

SASKATCHEWAN AND ALBERTA

450,000 acres to choose from
PRICES LOW

Terms most generous and helpful

Special inducements
Given Actual Settlers

Our crop payment plan requires
no payment on land bought until
the purchaser sells his first crop.
He can use all his capital for
cultivation and improvements.

Write for particulars.

RELIABLE AGENTS WANTED
IN EVERY COUNTY

F. W. HODSON & CO.

Room 102, Temple Building
TORONTO, ONTARIO, CANADA

Branch Office: North Battleford, Sask.
Also Agents Canadian Pacific Lands

HORTICULTURE

Orchard and Garden Notes

Plan the garden and fruit plantation for next year now. Send to reliable dealers for seed and fruit catalogues.

Sharpen and repair the garden tools for next season's use.

Go over the fruit and vegetables in the cellar, and throw out those decaying.

Mulch the strawberry bed with straw if it has not been done, especially if the snow is thawing off rapidly.

Send orders for seeds and fruit trees and shrubs early. Purchase those from reliable dealers as near home as possible.

Don't wait till planting-time to secure seed, and then buy package-seed from the grocery store. This seed is apt to be of inferior quality.

Rhubarb which was dug in the fall, and frozen, may now be put in a cellar or other dark warm place, thawed out and watered, when it will begin to grow.

A good way to give house-plants the thorough watering needed when they are dry is to set the pot into water and leave it until the soil is thoroughly moist.

A good way to prevent the settling of the snow, during the winter thaw, from injuring the plants is to scatter ashes or sand over the crust. This melts the snow in spots, and the branches are able to break through it easily.

Visit your district school, and note the conditions under which the children and teacher are working. Is there a good windbreak about the yard? Are there any shrubs or evergreens planted on the place? This is a good time to plan for new shrubs and plants on the school grounds, and to order them. Get the school children and the neighborhood interested.

I enclose \$1 to renew my subscription to Farm and Dairy. It is a most valuable paper and extremely reasonable in price.—Wm. Bate, Richmond Co., Que.

Cooperative Society's Success

D. F. Hamlin, Sec'y, Huron F. G. A., Huron Co., Ont.

Our Fruit Growers' Association was organized last spring with 27 members. We packed only about 3,000 barrels this year, as the crop was not heavy. The members seem to be well satisfied with the work, and there are a number of other fruit growers whom I think will join during the next few months.

The main benefits that have been derived from the Association so far have been in the better care of the orchards. Spraying and cultivating have done a great deal for the crop. Instead of having nearly all culls, the fruit is packing up nearly all No. 1 grade, and growers are getting a better price for their apples on that account. They thus see the results of co-operating in the care of the orchards.

We do not expect to have much difficulty in getting a large organization another year, as Huron county is well adapted for growing the fruit if properly cared for. As yet not only apples, I am growing peaches as well on my farm. I have 20 acres of peach orchard now under cultivation. Fifteen acres of two-year-old trees have grown fine. So far trees that have been set a few years had a nice crop of peaches this year. I am satisfied, therefore, that we can grow peaches here as well as in any other part of Ontario.

Apples for Middlesex Country

We are planning to plant 100 acres of winter apples. Kindly advise me as to matter of varieties.—O.B.M., Middlesex Co., Ont.

You state that you intend to plant winter apples. I believe I am correct in stating that those who have given most thought to the question of varieties for Southern Ontario are using a good many fall varieties. Following is a list of those I would recommend for the locality in which you propose to plant. Personally I would feel very much like including Duchess in the list, although Duchess is an early apple, ripening in August. I am quite convinced that Duchess is properly handled in Southern On-

tario would be a very profitable proposition. Alexander, Wealthy, Snow, McIntosh, Blenheim, Greening, Baldwin, Spy would be my choice. Alexander is ripe in September, and the others follow in the order named. If you desire to confine yourself entirely to winter varieties you will, of course, use the last three. Blenheim and King are classed as late fall or early winter, as are also Snow and McIntosh.—Prof. J. W. Crow, O. A. C., Guelph, Ont.

Factors That Influence Color

W. T. Macoun, C.E.F., Ottawa, Ont.

Our object in the management of an orchard should be to get the largest crop of No. 1 fruit, possible and of the highest color. High colored apples sell better than those not well colored. Points which influence the color of fruit are as follows:

Anything that matures the fruit quickly increases the color.

Fruit on young trees is not so highly colored as on old trees. Fruit is of a better color where the wood ripens quickly.

It is often said that certain fertilizers will increase the color of fruit. None have done so with us, and there are no reliable experiments to show that potash influences color. Fertilizers, however, such as nitrate, which causes late growth, will lower the color.

Insufficient nutrition will heighten color. If you will but notice that when a branch breaks partly off and the flow of sap is impeded the apples on the broken branch will be of higher color than those on the rest of the tree.

An orchard in sod has high colored fruit, but both the fruit and the total profit is small.

Cover crops increase the color of fruit by robbing the tree of moisture and hastening maturity.

Checking growth to induce high color will also induce the formation of fruit buds for the next season's crop.

Sheep are excellent animals to have in an orchard that is to be pastured. Care must be taken in any case that the trees are not injured by the stock that pastures in the orchard.

Don't sit by the fire

You can't work in the orchard these days, of course, but that is no reason why you should wait all the winter months. We can help you put them to good use.

It is easy to sell "Brown's trees" because everybody knows that "Brown's Trees are good trees." It is pleasant work selling "Brown's trees" because you get all around the county seeing old friends and making new ones. It is instructive work selling "Brown's trees" because it gives you a chance to exchange ideas with other good fruit growers. It is profitable work selling "Brown's trees" because you get liberal commissions on your orders.

Just cut out this ad., write your name and address on it, and mail it to us. We will do the rest.

Brown Bros. Co., Nurserymen, Ltd.

Brown's Nurseries

County of Welland

Ontario

POULTRY YARD

Successful Feeding Methods

Mrs. Jno. Roseburgh, Brant Co., Ont.

The greatest profit from poultry is secured when most of the eggs are laid during the winter, when prices are high. To obtain winter eggs, not only should the fowls be young and of a good laying strain, but the feeder should have a full knowledge of the proper feed and its preparation.

In feeding poultry a valuable lesson may be learned from Nature. In the spring the production of eggs on the farm is an easy matter. Fowls which are at liberty to roam find an abundance of green and animal feed on their range, which, with grain, furnishes a perfect ration for laying hens. In addition to this they get plenty of exercise and fresh air. So far as lies within his power, then, the feeder should aim to make the winter conditions spring-like.

SYSTEMS OF FEEDING

There are two systems in use for the feeding of fowls, in one of which all the feed is given dry and in the other one or more of the daily feeds consist of a moistened mash. The greatest advantage to be derived from the dry system are the saving of labor and the lessened danger of bowel trouble resulting from sloppy or soured mashes.

The grain mixture for dry feeding that we use is as follows: 200 lbs. cracked corn, 300 lbs. whole wheat, 130 lbs. whole oats. This mixture is scattered in the litter early in the morning and again about four o'clock in the afternoon. This gives the fowls plenty of exercise. I always give them a wet mash about half-past eleven. We also feed a dry mixture, consisting of 32 parts cornmeal, 30 parts animal meal, two parts oyster shell, one part grit, one part charcoal.

We put this mixture in a box or hopper on the side of the wall so the hens can get this mixture as they eat it away at the bottom. After dinner we take the top off the hopper so

the fowls can have free access to it for the remainder of the day.

A Necessity in the Hen House

Fowls need a chance to wallow in the dirt in order to free their bodies of scales and lice. Without this, their hens become covered with broken down scales which, together with lice, cause intense itching.

In the winter a dust bath usually has to be provided inside of the poultry house and should be near an open window so that the sun shines on it during a part of the day. For this purpose a common box filled with fine sand to which has been added a little insect powder is quite effective. Sifted coal ashes and road dust, etc., also make effective dust baths.

In a house which has a good dry sand floor, or in a cement floored house where the floor is covered with three or four inches of fine sand, a dust bath is seldom needed as the hens will wallow in the sand on the floor.

Dirty Eggs a Serious Loss

While there are a few egg producers who take the best of care of their product, most of our farmers consider the eggs produced on our farms a by-product, and makes very little provision for their care, aside from gathering them.

A large loss is caused by dirty eggs, the number being enormous, and, according to the estimate of Secretary Wilson, of the United States Department of Agriculture, this money loss to the farmers in the United States amounts to about \$5,000,000 annually. The loss in Canada also is large.

This loss is very largely brought about by not gathering the eggs often enough. In wet weather more dirty eggs are found than at any other time. This is caused by the fact that the hen's feet are often covered with mud or other filth, and in going to the nest to lay she soils the eggs already in the nest.

PROVIDE CLEAN NESTS

An insufficient number of nests is often the cause of many of the dirty eggs found. Eggs are often covered with ground and around the hay and straw stacks, and, becoming stained, are

classed as "dirty." Again, when too many eggs are allowed to remain in a nest some are broken and many of the others become smeared with broken yolks. This condition is often brought about by allowing the broody hens to use the same nests with the layers. On a farm where one nest to every four hens is provided, and the nests are kept clean and well bedded, it is found that very few dirty eggs are produced.

After gathering the eggs, care should be taken not to put them where they will become heated, and near oil, onions or other vegetables, as they readily absorb odors. Although dirty eggs may be perfectly fresh, they invariably sell as "seconds," and when but a few dirty eggs are mixed with an otherwise fresh, clean lot, they materially decrease the price of the clean eggs.

Fouly Pointers

Lining nests with green tansy is said to be a good preventive for chicken lice.

A good mixture is all right, but it is more trouble and expense to keep a good mixture than to keep one breed pure.

There are many hens on the farm, and among many of the poultrymen's flocks that do not lay 50 eggs a year, and some even less; and a few with 350 egg records; and a few records even higher have been recorded.

While preparing things for the poultry through the winter, don't neglect to provide poultry literature to your information. Select what seems best suited to your part of the business, then make good use of your selection.

Books on poultry matters are very valuable, but the up-to-date poultry papers and the poultry matter in farm papers, usually contain good advice, and experiences, hints and observations that you cannot get from books; so don't neglect that branch of the poultry business; also remember there is no gold mine nor "get rich quick" scheme, in the poultry business, but if these four words are put in practice, cleanliness, punctuality, perseverance and care, a good profit will be received from poultry.

125 Egg Incubator with Brooder **LAURA ROSE** **NO. 10**

is ordered together. Freight paid out of pocket. Hot water, perfect work, 100% success. Write for literature. Send 50c. Wisconsin Incubator Co., Racine, Wis., Box 177.

Farm Help AND Domestic Servants

Can be had on application to the **Salvation Army Immigration and Colonization Dept.**

Head Office, 22 Albert St., Toronto, Ont.

Our men have given satisfaction. We bring out the best class of men and take care in the placing of them.

FARM DAIRYING A New Book by Price only \$1.35 postpaid. Order through **Book Dept., FARM AND DAIRY, Peterboro, Ont.**

FURS

Trappers and Dealers in any part of New York, cannot afford to dispense of their collections without first obtaining our quotations. We specialize in the following: **RIGHT PRICES LIBERAL ASSORTMENT** and remittances forwarded same day received. Express and mail charges on all shipments paid by us, no shipment too large or too small. **"There's a Reason."** Your business and correspondence solicited. **DRY D. John Hallam - Toronto**

HORSEMEN IT WILL PAY YOU TO TELL OUR Dairy Farmers

Of the horses you have for sale. The Dairy Farmers are mounted farmers. These farmers who read Farm and Dairy have this year enjoyed an income of \$25,000.00. Will you come in Farm and Dairy and get your share of this which will spend for horses? Our rate is a low flat rate of only 40 cents per inch for the entire year. Have your copy in us by Saturday of any week preceding date of issue. **FARM & DAIRY, Peterboro, Ont.**

Learn from this FREE BOOK about roofing best

Use the coupon to get your copy of the revised edition of "TRUTH ABOUT ROOFING." Use it, and read the book, whether you are ready now to repair or build, or not—for the book is packed with NEW facts you want to learn about the

TRUTH ABOUT ROOFING

Other roofings may partly protect, but surely cost more in the long run. But here is a roofing that actually costs least in the end, and that FULLY PROTECTS AGAINST LIGHTNING—sold under a Guarantee Bond to do that. Post yourself about the Preston Specification that makes old buildings or new ABSOLUTELY safe under the one COMPLETE roof.

Edolph
MANAGER

PRESTON SAFE LOCK SHINGLES

Here, at last, is the metal roofing which absolutely protects against lightning—as well as against wind, water and fire. No matter what your opinion of roofing materials, there is something better than ever was offered you before—and you'll find it in Preston Shingles. Let the book prove it to you. It will.

The edition is limited. We want you to have a copy. To get it, simply fill out this coupon here, mail it to us, and do that NOW—before you put aside this journal.

METAL SHINGLE AND SIDING COMPANY, PRESTON, ONTARIO

Send me the book, and postpaid a copy of the new edition of "TRUTH ABOUT ROOFING" and tell me how to protect my buildings against lightning.

Name Postal address Province

I clipped this from page of paper.

Please see me to fill in this coupon.

You may quote me in price on about square feet of Preston Shingles, with out obligation to myself.

SWINE DEPARTMENT

Our readers are invited to ask questions in regard to swine. These will be answered in this department. You are also invited to offer helpful suggestions or relate experience through these columns.

Points For Pig Men

It must be a good farm workman to whom the exclusive care of the hogs can be given. The master's eye should be upon them every day.

Second crop alfalfa is fine for the pig, but if pastured very closely it will soon run out.

The pig can eat more than he can digest; and digest more than he can use. So it is not a fact that a pig can take care of all he can eat.

There is no feed better for young pigs and calves than sweet skim milk right from the separator.

Pigs, sows and fattening hogs should be kept in separate enclosures. They will be healthier and derive more benefit from their feeds by such handling.

The most profitable pork is produced by using as largely as possible other feeds than corn.

Sows that come from prolific families are more certain to inherit those qualities and become good mothers than those that descend from families that are less prolific.

Where it is possible, it is best to defer selection of sow pigs for the breeding herd until they have made considerable growth.

Give the sow a movable house in the pasture just before farrowing time as the youngsters will thrive on the grass. If she farrows in the fall the quiet of the pasture is just what she needs.

Care of Breeding Sows

R. H. Harding, *Middlesex Co., Ont.*
If, in order to have the first litter farrowed by a certain time, it is necessary to breed early, it is best to

SEED GRAIN

Have You Any For Sale?

If it is good seed and you are prepared to stand back of it with your guarantee, it will pay you well to advertise it in Farm and Dairy.

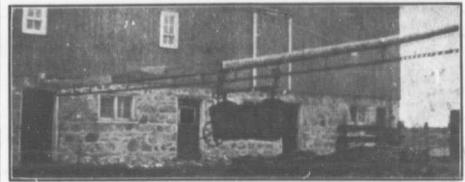
Good Seed is very scarce this year. Many of our readers will want your seed and will pay a good price for it. Your advertisement in Farm and Dairy will be read by over 12,000 farmers. It will cost you just an inch; \$1.00 for two inches.

Farm and Dairy, Peterboro, Ont.

necessary to breed the sow younger than we think wise; it is advisable to keep her farrow a few months before breeding for her second litter to allow her to more fully develop.

CARE AT FARROWING TIME

As the young sow approaches farrowing time she should be given a roomy pen (all her own), where there is nothing to excite her. Here she should be fed laxative foods, such as a few sugar mashes, house slops or milk and middlings. We avoid food of a hot nature that is likely to set up indigestion or constipation which, I believe, is largely the cause of sows eating their young. Salt, sulphur and charcoal, or hardwood



Why use a Waeelbarrow?

The advantage of the overhead litter carrier is self evident. All who have struggled up the side of a manure pile with a barrow load of manure will appreciate the advantages that is likely to therefore a money saver as well. The carrier here illustrated is in use on the farm of Chas. Watson, York Co., Ont.

ashes, is a good mixture to have within reach of the sow at this time.

It is a good plan to spike a pole or scantling around the inside of herpen, about six inches from the wall, and about the same distance from the floor to allow the youngsters a place of protection from the danger of being squeezed by their mother.

PREPARE FOR WEANING

As soon as the pigs begin to run around they should have a creep where they can go unmolested, in which they will soon learn to eat, thereby removing a large part of the drain from their dam. They will thus gradually fit themselves for weaning time, which should be at not less than eight weeks old. They should then be in good shape to grow into money-makers.

I received my fountain pen for securing a new subscription for Farm and Dairy, and think it is a beauty. I did not expect such a nice one, and such a fine writer.—Maimie Geddes, Huntingdon Co., Que.

Red Polls—A Dual Purpose Cattle

Geo. Sueda, *Llano Dist., Man.*

Many people will ask the question, what are the advantages of the dual purpose breed—Red Polls—over the special dairy or beef breeds? And I wish to say right here that if these highly specialized breeds are given the requisite feed, shelter and care they will give better returns than the dual purpose breed. The average farmer, however, has neither the time or the inclination to give these higher specialized animals the proper care they require, and prefers an animal which from a standpoint of

Polls are both milkers and Lutter makers. Last year at the Smithfield Show in the slaughter test the Red Polls showed as much daily gain in live weight as any of the beef breeds, and the per cent more of the total to the live weight was about the same.

We know that some strains of Shorthorns as they exist in England are good dual purpose cattle, but where can they be had in this country in a sufficient number to satisfy the needs of the farmers who require them? Some herds of Red Polls are being bred in Canada, and more recently more attention is being given to breeding for the dual purpose type.

Dual purpose cattle are suitable for those farmers who do not think they can give as much time and attention to their stock as either the higher specialized dairy or beef breeds require.

About Plans for Next Year

A. D. Wilson

During the winter considerable spare time can be very profitably spent in planning the work for next year and years to follow. We know of two farms of equal size and character; one of which is so planned that men and teams travel an average distance of but 28 rods from the farm buildings to the fields. The other is so planned that an average distance of 69 rods must be traveled from the farm buildings to the fields. The second farmer is handicapped by a good many miles of unnecessary travel for himself, his teams and his machines. Planning ahead will often avoid this handicap.

That one should keep accounts with his various enterprises is as important a thing as to keep accounts with his various customers. While a farmer does not, as a rule, do business with as many people as does a merchant, any of his live stock enterprises, such as crops or a stock farm, will prove unprofitable as the merchant's customers. Only by keeping records of these various enterprises, and knowing just what you are getting, can the farmer be able to determine the lines along which it is advisable to make increases, and the lines it is advisable to curtail or discontinue.

Agriculture is being taught in a large number of rural schools. Many teachers are striving hard to overcome the difficulties encountered, and to give some valuable instruction along this line. We believe these teachers deserve the hearty cooperation, assistance and support of parents. With such support, any teacher who takes an interest in farm boys and girls, and in country life, can study with them many of the simple farm problems, to the great advantage of the school and community.

While planning the work for next year, do not forget about the home. It is now possible and practical to have in many country homes modern conveniences, such as a hot water, hot and cold, and sewage-disposal facilities. A septic tank can be constructed for from \$15 to \$25, suitable to take care of the sewage from an ordinary farm family. On farms equipped with windmills and force-pumps, hot and cold water can be run into the kitchen sink, and the sink connected with a cesspool, at the additional cost of not to exceed \$50, such improvements usually prove excellent investments.

Seed and the preparation of soil are the two important factors determining the yields of crops. Rental value of the land, harvesting and threshing usually have very little to do with the yield of the crop. In grain crop the preparation of the soil and the seed usually amounts to between \$2 and \$3 per acre. Oftentimes a little additional effort and care in seed-selection or in the preparation of the soil, or costing perhaps \$1 to \$2, will increase the yield a great deal more than that amount.

There is an Easier way

The advantage of the overhead litter carrier is self evident. All who have struggled up the side of a manure pile with a barrow load of manure will appreciate the advantages that is likely to therefore a money saver as well. The carrier here illustrated is in use on the farm of Chas. Watson, York Co., Ont.

nature is more evenly balanced. This is the place that the dual purpose cow fills. She is a fairly good milker and has good fleshing properties, so that a steer born her makes a good beef animal, and as a rule dual purpose cows are less liable to disease.

The question arises, are dual purpose cows profitable? My experience is that they are. We hand milk all our cows, and test and weigh the milk occasionally, and our cows average not less than 300 lbs. butter fat a year. We try and have them drop their calves in the fall if possible, so that the cows are dried off during the busy time of harvesting and the calves are ready to turn out in the pasture about the 1st of June.

In connection with the Red Polled Cattle Club of America, a record of 12 cows was kept from March 1st to November 21st, 1910, and the highest score was 19,807.75 lbs of milk and 551.25 lbs of butter fat. Below are the figures, etc.:

1. Liza H. B., 20,408, Nov. 17th, 1909, to Nov. 17th, 1910—10,807.75 lbs of milk and 355.35 lbs. butter fat.
2. Pear, 24,888, April 9th, 1907, to April 9th, 1910—9,183 lbs. milk, 145.45 lbs. butter fat.
3. Jane J., 24,698, April 1st, 1909, to April 1st, 1910—9,397.35 lbs. milk, 120.11 lbs. butter fat.
4. Ruby Rose, 22,524, Oct. 16th, 1909, to Oct. 16th, 1910—9,051.75 lbs. milk, 405.40 lbs. butter fat.
5. Lillie, 20,467, Sep. 13th, 1909, to Sep. 13th 1910—8,563.9 lbs. milk, 387.87 lbs. butter fat.
6. Lillian, 19,928, Dec. 18th, 1909, to Dec. 18th, 1910—8,836.9 lbs. milk, 383.10 lbs. butter fat.
7. Ruth, 20,449, Nov. 21, 1909, to Nov. 21, 1910—8,699.8 lbs. milk, 367.50 lbs. butter fat.
8. Alice B., 22,687, Nov. 6th, 1909, to Nov. 6th, 1910—9,389.5 lbs. milk, 363.81 lbs. butter fat.
9. Helen, 22,714, Oct. 1, 1909, to Oct. 1st, 1910—8,140.8 lbs. milk, 349.31 lbs. butter fat.
10. Daisy, 18,487, Mar. 1st, 1909, to Mar. 1st, 1910—9,841.75 lbs. milk, 329.29 lbs. butter fat.
11. Diana 2nd, 26,578, Nov. 6th, 1909, to Nov. 6th, 1910—7,082.6 lbs. milk, 316.58 lbs. butter fat.
12. Lady, 22,638, Oct. 6th, 1909, to Oct. 6th, 1910—8,370.7 lbs. milk, 313.78 lbs. butter fat.

These figures show that the Red

PEERLESS - PERFECTION

MEANS FENCE PROTECTION

Peerless Wire Fence does not serve only as a mere boundary line for your farm and pastures but gives real fence service as a permanent barrier to trespassing and wandering of stock.

You Should Fence Your Land With PEERLESS

We use high grade fence wire galvanized. The joints are united by the non-slipable Peerless Lock, making a fence that will stand up against the most severe and sudden shocks without damage. The horizontal wires are all crimped, making ample protection for contraction and expansion, keeping the fence always tight even under extreme variations of temperature.

Write for our Illustrated Booklet at Once

We also manufacture a wonderful line of poultry fencing and farm gates. Agencies almost everywhere. Agents wanted in all unassigned territory.

The Banwell Hoxie Wire Fence Co., Ltd.

Winnipeg, Man.,

Hamilton, Ont.

Farming

has become a specialized business



It's no longer a "hit-or-miss" occupation, where "any old way" is good enough. Farmers are buying pianos and automobiles as never before. They're *living* as well as *working*.

The farmer has learned that it *pays* to employ progressive methods. That's why he is ever ready to receive helpful suggestions for improving his crops, his land and his home. It's also the reason that more than fifty thousand Canadian farmers are enthusiastic about our handsome book,

"What the Farmer Can Do With Concrete"

It isn't a catalogue, nor an argument for you to buy something. It is clearly-written, interesting, profusely illustrated. It describes the various uses to which concrete can be put on the farm. Not theories, but facts, based on the *actual experience* of farmers all over the continent. It is the most complete book on the subject ever published, fulfilling the

purpose behind it, which is to help the farmer take advantage of concrete's possibilities. The list of subjects covers every conceivable use for concrete on the farm. The book's actual value to you will far exceed the list price of fifty cents, but if you will send us your name and address at once we'll be glad to

Send it to You Absolutely Free

Send a post card for it--do it to-day. The book will be sent by return mail.

Canada Cement Company
LIMITED

National Bank Building, Montreal



X

Almost any one can manufacture. TO SELL IS THE REAL PROBLEM. Beatty Bros., of Fergus, Ont., have done much to solve this problem, insofar as their line is concerned.

Many years ago Beatty Bros., the father and his brother, made reapers and other farm machinery at Fergus. The line was a success in those days as successes were then rated.

But things have since changed and progressed. The present firm of Beatty Bros. was founded in 1901, at which time all of the old patterns were destroyed and a new line of equipment of superior merit manufactured.

Four years ago Beatty Bros. did not advertise at all. In the spring of 1909 they started in to advertise in farm papers. They have been increasing their advertising expenditures each year since.

RESULTS HAVE BEEN MOST GRATIFYING. In four years their sales have more than quadrupled.

Four years ago, their present advertising manager, Mr. J. B. Brown, handled the office work. Now they have ten in the office. Four years ago they had only one traveller. Now they have nine travellers in Ontario, one in Quebec and three in the West.

Beatty Bros., to keep pace with the demand they are creating for their BT. line of stable and barn equipment and hay tools, have recently erected a large new factory, 380 feet long by 80 feet wide. This new factory will be used entirely for the manufacture of BT. stalls and stanchions. The old plant will be continued also and there the hay tools and other lines of barn equipment will be manufactured.

"WE ATTRIBUTE MUCH OF OUR SUCCESS during the past few years TO ADVERTISING," states Mr. Will Beatty. "Recently I visited a plant similar to ours in the States. There they do things in a progressive way, and retain AN ADVERTISING MAN AT A SALARY OF \$2,500 A YEAR, who is MAKING for them BIG RETURNS on the money they are investing in advertising."

RIGHT THROUGH THE SEASON practically THE WHOLE YEAR ROUND, BT. ADS. with their characteristic distinctiveness ARE TO BE SEEN IN LEADING CANADIAN FARM PAPERS. They use LIBERAL SPACE IN FARM AND DAIRY.

Farm papers can serve you as they have assisted Beatty Bros. to successful selling. If you have an article for farmers, if you have an article which you believe farmers and dairy farmers would BUY and LIKE, then it will pay you to advertise it in Farm and Dairy.—**"A Paper Farmers Swear By"**

Selecting a Dairy Cow

Prof. W. H. Few, Iowa State College
The dairy cow must be able to consume large quantities of roughage, because the roughage is the cheapest part of the ration. In order to produce large quantities of milk she must eat large quantities of food, or, in other words, be a good feeder. The large muzzle, head of proper proportions, great depth through the chest, and large size of barrel are all indications of feeding capacity. The cow with the contracted muzzle, the narrow face and head, the shallow chest, and lack of "bread chest" is the cow that refuses to do her duty to the feed manger.

By constitution is indicated the power to withstand the severe strain of producing large quantities of milk as well as being able to produce offspring. In order to do these things the cow must have proper heart, liver and spleen, which are vital organs can perform their duties. The strong, vigorous cow with large nostrils, the clear and healthful appearing eyes, the short and large barrel, is the cow of strong constitution. Cows weak in constitution have been found to be light feeders, easily thrown off feed, not persistent milkers and not economical producers.

SEE MUST KEEP IT UP

Persistence in milk flow is one of the qualities which make a profitable dairy cow. The cow that starts in at freshening time to produce 30 or 40 lbs. of milk daily and fails to continue this flow for only a short time is not the persistent milker. To be profitable it requires a cow to give a large flow of milk through her entire lactation period.

Beef cattle will convert the food they receive into body fat. The best type of dairy cow will convert her food into milk and butter-fat, and will even rob her body of fat in order to supply the pail. The type of cow that lays on fat instead of producing heavily is the undesirable type of cow for dairy purposes.

Regularity of breeding is another one of the requirements of a dairy cow in order to ensure the heaviest of milk production. Of course, farrow cows will be persistent in their milk flow, but they will not produce the maximum quantity.

Ducility is another of the important requirements of a good dairy cow. Ugliness and irritability are not qualifications at all desirable.

WHAT IS "DAIRY TEMPERAMENT"?

The term "dairy temperament" is applied to dairy cattle indicating strong vitality and recuperative ability, enabling the animal to maintain her productive powers. Such temperament is found in cows open in their skeleton framework, having much space between vertebrae of the back and between the ribs.

The mammary system is of utmost importance in considering the qualifications of a good dairy cow. The udder, the centre of milk manufacture, ought to be large, well balanced as to quarters, extending well in rear and forward on the abdomen; the teats of good size and squarely placed on the corners of the udder.

The udder must be well nourished with blood, which carries the nutrient portions of the digested food. This blood reaches the udder through the pelvic region and is carried away by the milk veins which appear on the abdomen of the cow and enter the milk wells. Hence the size of milk veins and milk wells are indicative of the amount of blood that is passing away from the udder. The skin of the udder ought to be soft, and the udder itself ought to be pliable.

The typical dairy cow combines feeding capacity, great constitution, and large milk production in a body of quality, full of nerves and not disposed to lay on fat during the production period.

DE LAVAL CREAM SEPARATOR

Now Is the Time to Buy and Start the New Year Right

There is no good reason to defer the purchase of a DE LAVAL cream separator until Spring. On the contrary you may buy one now and save half its cost meanwhile. Moreover, if you can't conveniently pay cash you can buy a DE LAVAL machine on such liberal terms that it will actually pay for itself.

As to YOUR need of a centrifugal separator, if you have the milk of even a single cow to cream you are wasting quantity and quality of product every day you go without one. This waste is usually greatest with cold weather and cows old in lactation, and it counts most, of course, when butter prices are high. Then there is always the sweet skim-milk and saving of time and labor in addition.

When it comes to a choice of separators DE LAVAL superiority is now universally recognized. Those who "know" buy the DE LAVAL to begin with. Those who don't replace their other separator with a DE LAVAL later—thousands of users do that every year. If YOU already have some other machine the sooner YOU exchange it for a DE LAVAL the better.

Why not start 1912 right in dairying? TRY a DE LAVAL machine for your own satisfaction if nothing else. See the nearest DE LAVAL agent or write us direct and we'll do the rest.

THE DE LAVAL SEPARATOR CO.

173 William St.
MONTREAL, CAN.

14 PRINCE ST.
WINNIPEG, CAN.

? Do You Want ? TO MAKE \$30.00 ?

Mr. Bert Stansell, a young farmer in Elgin County, on 2 rainy days last fall got 24 of his friends and neighbors to subscribe to Farm and Dairy. He made big pay.

You can do as well. You Should be able to do better at this favorable season.

Get 25 of your friends and neighbors to take Farm and Dairy, each at only \$1.00 a year, and we will pay you \$15.00 cash.

There are at least fifty—it may be there are 100—farmers in your locality who do not now take Farm and Dairy. Perhaps some of them do not know about Farm and Dairy and have never heard of us.

Get 50 of these people to take Farm and Dairy, each at our low rate of only \$1.00 a year, and we will pay you \$30.00 cash.

You cannot lose. Try this work. Should you not get 25, we will give you the very liberal cash commission of 50 per cent. for all New Subscribers you get.

Now is your slack time. Here is your opportunity. Don't delay. Start right in to-day.

FARM AND DAIRY, PETERBORO, ONT.

NOTE—This is an excellent opportunity for you to make talent money for your church. Sunday School, or Young People's Guild.

tion or will
 mation suan
 r? He may
 ution to, and
 suggestions,
 the "other
 can only be
 men in the
 s, arguments
 ent will drive
 and cents
 will generally
) Chances
 ily become a
 of quality,
 sake of the
 s which will
 ockets as a
 matter of
 of contact.
 of a quality
 y act as an
 ily patron,
 ear to the
 outh while?
 s from Mr.
 iven in later

Cheese Department

Makers are invited to send contributions to this department, to ask questions and make remarks relating to cheese making and to suggest subjects for discussion. Address letters to The Cheese Maker's Department.

Comments by a Cheese Buyer

G. A. Gillespie, Peterboro Co., Ont.
 In the Peterboro district about three properly equipped curing rooms. The cheese kept in these rooms was not cut in price last season. The cheese stored in every other factory in the county had cuts of one-half cent to one cent a pound for heated cheese. Such cuts would soon pay for a cooling room.

The patrons should bear the expense of installing such a room. They derive the benefit and get the profit. I believe that patrons can afford to pay the maker one-eighth cent more for making on condition that he would install cool curing facilities and then have one-eighth cent more for themselves at the very least.

Last summer I was driving around with a large dealer in cheese from the Old Country. He told me that they paid 18 cts. a pound for English cheddars when they were not paying 14 cts. for ours. If we would put up the same quality, we would get the same price. As an evidence of the care which the English makers take of their cheese, this dealer told me that cheese were not boxed at all but were carried to market in sacks.

We need more enthusiasm in the dairy industry. We need patrons who are wider awake to the best interests of their industry. We have had a poor year. Let us prepare to make the best of another by producing more milk, better milk and then provide cool curing facilities for the cheese.

Profitable Feed for Milk Production

Cotton Seed Meal
 41 to 48 per cent. Protein
 \$56.00 a ton F. O. B. Peterboro
 (1 lb. equal to 4 lbs. White Bran)

G. A. Gillespie, Peterboro, Ont

You Don't Have to Be an Engine Driver To Run a

STICKNEY Gasoline Engine

It is no simple that it almost runs itself. The engine that any man can depend on always, for all kinds of work about the farm. Our catalogue, sent free, shows why the STICKNEY is the best engine for you. Write

Ontario Wind Engine and Pump Co., Limited



Winipeg
 Toronto
 Calgary

FOR SALE
 Two creameries in Central Alberta, about half way between Calgary and Edmonton. Good dairy district and good paying business. Apply to
 J. F. MILLAR, BENTLEY, ALTA.

The Why Problem Many Sided

D. J. Cameron, Dairy Instructor, Victoria Co., Ont.

Pasteurization of milk and the taking of it home in the milk cans is all right if it is done, but there is a big "if" there. A little bad milk, that is milk contaminated with injurious bacteria, will seed all the milk of the whole section. The cheese-maker may be short of steam, or the whey tank is not clean, or all the whey has not been removed, or a dozen and one other circumstances combine to prevent proper pasteurization.

At many factories, the whey tank is never completely emptied. The whey left over from day to day would have to be pasteurized over and over again. This costs money, and the large amount of water thus introduced into the whey reduces its feeding value.

On milk routes the driver counts on a light load back. If he regulates the amount of whey taken back, the patrons who send their milk on the route will not get their fair share, and the chances are the whey tank is never emptied. To ensure emptying it at the tank to regulate the amount of whey given on each route. This would mean an increased expense of \$1 a day. Farmers are too indifferent to the whey to permit of such an expense.

The selling of all the whey to one man who guarantees to keep the tanks clean, seems to work out most satisfactorily. At Fleetwood, Ont., a farmer has the whey piped to his farm, 300 rods away, and feeds it to his pigs. He gets \$4 for 75 cts. a standard. The trouble here is that the patrons practically lose their whey.

I object to pig feeding at the factory, as it gives rise to objectionable odors. The best of the pig pens located at sufficient distance from the factory may be permissible.

The disposal of whey at these factories is a serious proposition, as much fertility is lost to the farm each year. While, however, the farmers are so indifferent to this drain on the fertility of their farms, I cannot see any practical solution to the question that will give to the patron full value for the whey.

The Pasteurization of Whey

Frank Hens, Chief Dairy Instr., W. Ont.

(Continued from last week)

1. One hundred and fifty-five degrees is about the average temperature to which the whey may be heated without coagulating the albumen. The time of exposure is prolonged, and should be as effective as a higher temperature for a short time such as may be used for skimming.

2. If the tanks are reasonably clean and covered, and if the whey of the previous day left over, beginning to heat shortly after the whey leaves the vats, this temperature insures the whey of the morning the following morning with an acidity not greater than 3 per cent (practically sweet) and a fat content of about 21 per cent.

3. The whey in covered tanks (say 20,000 lbs.), if heated to 155 degrees, will remain above 150 degrees from one to one and a half hours, above 140 degrees from one and a half to two hours, above 130 degrees from two to four hours or longer. It will be delivered in the patron's can after 20 hours at a temperature of from 110 to 130 degrees.

NOTE.—The average temperature at which ordinary whey is returned is about 80 degrees, being lower in spring and fall.

4. The time required to finish heating is from one to three hours, depending on the quantity of whey, position of tanks, size of boiler, arrangement of pipes and steam pressure.

5. Proper pasteurization has resulted in a general improvement in the flavor of the cheese. At a number of factories where the bitter, fruity flavor had been persistent for years, the yeasts are completely eliminated. In many others they are reduced to the minimum. The flavors may appear occasionally at some factories but are not carried through the whey to the other patrons, as they can easily be detected by the curd test and dealt with at once.

6. Patrons state that the feeding value of the whey is improved. Experiments at the O. A. C. have shown that sweet unskimmed whey direct from the vats had from 25 to 33 per cent greater feeding value than skimmed whey. As ordinary factory whey is in many cases gravity skimmed, usually contains quantities of wash water, and as about one per cent of the sugar is changed to lactic acid, which has no direct food value, it is fair to conclude that there is a considerable increase in the feeding value of pasteurized over ordinary whey, especially for young calves and pigs.

7. If wash water is run in the tanks after the heating is finished the whey may be cooled down too rapidly and probably re-infected. If the whey is heated after the wash water is run in results are fair, but the whey is much diluted.

8. If a quantity of surplus whey is left over from day to day, it finally becomes sour, for although all may be heated each day, the surplus finally acts as a culture in the new whey and the whole becomes sour. To get the best results the tanks should, if possible, be emptied each morning, the surplus whey and wash water either drawn away or run into the usual drainage channel or septic tanks provided.

9. The cost will depend on experience, the methods employed for heating and the price of fuel.

10. Different methods of heating will be found illustrated in Ontario

ASK LEADING FARMERS
THEY WILL TELL YOU
SHARPLES
Tubular Cream Separators

get more cream, cost less to run, and last several times longer than any other. No dinks. Double skimming force. Wear a lifetime. Guaranteed forever.

You expect The World's Best from the oldest separator concern on this continent—not from those who try to imitate our low supply can and self oiling system but are prevented by law from imitating The World's Principle. Write for catalog 253.

THE SHARPLES SEPARATOR CO.
 Toronto, Ont. Winnipeg, Man.

FOR SALE Up-to-date cheese factory and dwelling; good well. One acre land; received \$1.50 per 100 lbs. cheese for manufacturing 1/2 mile to school. Reason for selling—accepted Government position. This factory runs year round, and receives 6,000 to 8,000 lbs. milk per day in summer. Address: FRED S. HADLER, GREEN LEAF, WIS., U.S.A. R.R. No. 3, Box 6

FOR SALE AND WANT ADVERTISING
TWO CENTS A WORD, CASH WITH ORDER
SEVENTY-FIFTEEN CHEESE FACTORY
 FOR SALE—Good dairy district. Cheese made for local use in city. Ill health reason for selling—Box W, Farm and Dairy, Peterboro, Ont.
FOR SALE—Iron pipe, Pulleys, Helms, Rails, Chain Wire Fencing, Iron Posts, etc. all sizes, very cheap. 1/2 cent for list, stating what you want. The Imperial Waste and Metal Co., Dept. F.D., Queen street, Montreal.

Department of Agriculture, Bulletin No. 183, "Notes on Cheddar Cheese Making."

THE DAIRYMEN'S ASSOCIATION OF WESTERN ONTARIO
 Extend to you a very Cordial Invitation to attend
 THE
45th ANNUAL CONVENTION
 AND
WINTER DAIRY EXHIBITION
INGERSOLL
JANUARY 10 and 11, 1912

\$500 in PRIZES for Butter, Cheese and Dairy Herd Competition with Silver and Bronze Medals

Cheese Buyers' Trophy, valued at \$150.00 for Sweepstakes Cheese

MANY SPECIAL PRIZES
 EXCELLENT LIST OF SPEAKERS. THREE SESSIONS EACH DAY
 Each of which is of interest to Milk Producers
WEDNESDAY AFTERNOON SESSION SPECIALLY FOR FARMERS
EVERY PERSON MADE WELCOME. REDUCED RATES ON ALL RAILROADS

FOR PROGRAMS APPLY TO—
WM. WADDELL, Pres. **FRANK HENS, Sec.-Treas.**
 Kerwood, Ont. London, Ont



WE should every day call ourselves to account. What infirmity have I mastered, to-day? What temptation have I resisted? What virtue acquired? Our vices will abate of themselves if they be brought every day to the shrift.

—Seneca

The Second Chance

(Copyrighted)

NELLIE L. McCLUNG

Author of "Sowing Seeds in Danny"

(Continued from last week)

Pearl, the oldest daughter of John Watson, a C. P. R. section man living in Millford, Mass., receives a large sum of money from the relatives of a young Englishman she had nursed when ill. She decides to educate herself and the rest of the family. The Watsons are joined by their Aunt Kate, who proves not an ungracious blessing. Pearl proves an efficient and clever scholar, and has dreams of being a school teacher. She sees that her small brothers are learning bad habits in the town and gives up her ambition to be a school teacher and suggests moving the family onto a farm, to which John Watson agrees. We are introduced to the children at a country school. Pearl, a bully, in a game of ah-hny, intentionally strikes with his club Libby Anne Cavers, for which he is thrashed by Bud Perkins. Libby Anne does not dare to say the blow was intentional, as her father owns Mr. Steadman's money. Bud Perkins is angry, but forgives Libby Anne, as he understands the circumstances. In the meantime the Watsons are getting established on their farm. The Watson family begin to attend the country school. Pearl calls on Mr. Barwell, the pastor, and asks him to conduct services in their school house. All attend the Pioneers' picnic.

WHEN the thought of Thursa's coming would intrude on her, or the bitter thought still that she was only a plain, sunburnt, country girl, with rough hands and uncouth ways, she forced them away from her even as you and I lie down again, and try to gather up the ravelled threads of a sweet dream, knowing well that it is only a dream and at waking time is drawing near, but holding it close to our hearts as long as we can.

Pearl had gathered up her four brothers after dinner and washed them clean at the river, also made repairs on their drooping stockings and twisted collars, and, holding tight to Danny, marshalled them across the end of the field to where



view of the game, and then went away to get a bag of peanuts for them.

In the centre of the field the referee placed the ball between Bud Perkins's stick and McLaren's, of Hillsboro. There was a moment of intense excitement, and then away went the ball toward Hillsboro's goal, half a dozen in pursuit. The whole field was alive with black and orange, blue and white, legs and arms and sticks darting in and out in a way that would make your eyes ache to follow them. Once the ball came to the side, causing a receding wave of fluttering muslin, Mrs. Maxwell, whose son had that shade of hair which is supposed to indicate a hasty temper, was shouting directions to him as loudly as she could. Mrs. Maxwell's directions were good ones, too, if Alec could only have followed them. "Shoot, Alec!" she called. "Shoot it in! Run, Alec! Shoot it in!"

Millford's only lawyer, the dignified and stately Mr. Hawkins, came majestically down the line, carrying a camp-stool under his arm. He had found it necessary to change his position, incensed at the undignified behaviour of the Hillsboro girls, who had taken up their position on one side of the field and were taking a wholly irrelevant in the game. He had ventured a slight rebuke, whereupon the lively battery of their indignation had been trained on him, with the result that he withdrew hastily. He sat down just in front of Mrs. Perkins and Mrs. Watson, and began to take an interest in the game. The ball was near Millford's goal and a scrimmage was taking place, a solid knot of players that moved and wretched and twisted.

Suddenly Bud Perkins shot out from the others, carrying his stick high above his head as he raced up the field. "Bide! Bide!" he cried. Millford cried in an ecstasy of hope and fear. He sprang, dodged, whirled, the whole field in pursuit, and then, when in line with Hillsboro's goal, he shot low and swift and sure! A great cheer burst from the crowd and was thrown in the air, little boys turned handspins, and Millford went stark, staring mad.

Mrs. Perkins was not naturally an excitable woman, and she looked the very soul of meekness in her respectable black dress and little black bonnet tied tightly under her chin, but if your only boy—the only living out of three—your boy that had been real delicate and hard to raise—if he had dodged the whole field and shot a goal, straight as a die, and the whole town were cheering for him, mad with joy, you might have been roused a bit, too. When Mrs. Perkins came to herself she was pounding her parasol on the broad, dignified

shoulders of Millford's most stately citizen, Mr. E. Cuthbert Hawkins, who moved away rather haughtily. Over near the lemonade booth, Bud's father was chatting to an interested group just how Bud came to be such a smart boy.

"Young Bud has never worked the way his father does," he said, "and like some men that get the cradle and farm hands and puts little lads building roads when they are so small they have to be weighted down with stones in their pockets and run down from blown away. Young Bud has run in the pasture all his life, you may say, and it would be queer if he hadn't some speed in him. He comes of pure good stock, let me tell you, registered in every strain, if I do say it. Look at that for a well rounded leg!" Mr. Perkins made it easy for every one to do as he pleased. "Eighteen inches around the calf and tapered to the toe!" He patted it lovingly. "I tell you, there was action there a few years ago!"

The game was played out no faster than ever. Hillsboro scored a goal through the Millford goalkeeper's stick breaking, and the score stood one to one until within fifteen minutes of the time. The Millford boys felt very nervous. Victory meant the district championship, and confusion to their enemies.

The game was close and hard—long throws—every inch contested—it had ceased to be a game, it was a battle! One minute the ball was close to Millford's goal, and the next Mrs. Perkins clutched each other's hands in wordless dread, but the wry form of Teddy Watson shot up in the air and the ball bounced back into the Hillsboro goal.

As he ran along the edge of the crowd with it, one of the Hillsboro girls slashed at him viciously with her red parasol. The captain shouted, "Bide! Bide!" But, as well, whose red hair made a shining mark for the Hillsboro girls, but Sandy was not a bit disconcerted by their remarks. Big Ben Hunter, his checkered cap under his arm, Big Dave was a powerfully built fellow with a chest like a Clyde and a cheerful expanse of freckles. As Alec Maxwell threw the ball to him, Perkins' Big Dave's long reach intercepted it, and then he made one of those grand rushes for which he was known and dreaded by his opponents, and which are still remembered. This time Dave's good old trick miscarried, for Teddy Watson's slender as he was, nearly body-checked him—the ball fell from his stick into that of Alec Maxwell, who, being his way through the Hillsboro defence, shot on goal and scored.

The home crowd went wild with cheers for time saved up, and the score stood two to one in Millford's favour. Thomas Perkins was hilarious. "Come on, John!" he said to John Watson, "let's have a little Schlitz, I never take anything stronger now since the boy grew up. What! You don't drink Schlitz? It's harmless hay-tea, but perhaps you're right."

CHAPTER XIX

THE END OF THE GAME

Oh, Thou who has lighted the sun!
Oh, Thou who has darkened the tar!
Judge Thou
The sin of the Stone that was hurled
By the Gods from the light of the sun
As she sinks in the mire of the tar!

—Kipling.

When Pearl got her four lively young charges settled down she looked about her for the spectators her searched for Libby Anne and Mr. Cavers, but they were nowhere to be seen, and Pearl became more and more troubled.

(Continued next week)

CHAPTER XXIII

THE LACROSSE MATCH

What's come of Billy Lindsay and the saxhorn fellers, say?
I want to hear the old band play.
—James Whitcomb Riley.

The great event of the Pioneers' Picnic was the lacrosse match between Millford and Hillsboro. It was held at three o'clock in the afternoon, and everybody was there.

The Millford lacrosse boys were in serious financial difficulty—"everything gone but their honour," as one sentimental member had put it, and if the columns of the Hillsboro Gazette were to be trusted, that was gone, too. But in the big game on this occasion they hoped to retrieve their fallen fortunes.

Everybody felt that the real business of the day had begun when the two lacrosse teams drew up on the field. The women had finished their clearing up after dinner, and piled chubarb leaves on their baskets to keep the eatables cool for supper.

Bud Perkins and Teddy Watson were playing for Millford, and Mrs. Perkins, Mrs. Watson, and Aunt Kate were in a pleasurable state of excitement, though they told the other women over and over that lacrosse was a dangerous game, and they did not want the boys to play. Mrs. Green, too, whose son Billy was Millford's trusty forward, experienced a thrill of motherly pride when she heard the crowd breaking into cheers as the Millford boys in their orange and black jerseys lined up on the field.

CHAPTER XXIV

THE PLEASANT APPROACH TO THE HOME OF A WELL KNOWN DAIRY FARMER

One of the well known farmers of Oxford Co., Ont., is Mr. W. C. Shearer, an illustration of whose home is here shown. Mr. Shearer is well known as a successful dairyman and institute speaker. He has made his home attractive by judicious planting. Note the nicely shaded drive. Such an approach could not fail to make a good impression on the visitor.

Arthur and Martha sat with Jim and Camilla, and Tom Motherwell and Nellie Slatt.

Dr. Clay came driving around the end of the field. When he saw Pearl he stopped and asked her if she would come and sit in his buggy to watch the game.

"I can't leave the boys, thank you, doctor," she said; "there's been three of them lost since noon, and they've all got their good clothes on."

"Well, of course, we'll have to keep track of them, in that case," he said, smiling, "because it would be a real loss to lose them, clothes and all. I tell you what we'll do, Pearl. I'll give you the horse and buggy—pile them all in, and it will be the easiest way of finding them."

The doctor drove to a clear space where the boys would have a good

Seeing
me with
the new
knowledge
that
tions the
of last y
ably, per
this, the
year. N
you shou
do bette
you use
may be
cesses.

First
of
sons.
oversting
and und
faults of
overcom
pared the
be able t

Next,
as you
really so
that you
serrated,
were you
better in
your Bil
ing not
day, if
faults i

Lastly,
that was
nature a
by spiri
ing rasso

It is a
solutions
and cond
them. G
seem to
glory, he
they dire
in the h
operation
never fail

As that
in our
thinking
like to be
law ord
desire to
our reg
and our
we lack
might fol
slender a
him—the
the bless
exact pr
our desi
your effo
But, as
blessing
If they
the resu
When
than we
our tea
the old
and we
made in
only wa
genuin
must con
our mind
desire to
what Chr
This wa
But, as
revealed
by prayo
God has
tain the
for the s
It is th
knowled
In Rom
transform
our
make no

The Upward Look

New Year's Resolutions

Seeing that you have put off the old man, and have put on the new man, which is renewed in knowledge after the image of Him that created him.—Colossians 3, 9, 10.

What resolutions have you made for the coming year? Did you fail so miserably, perhaps, that you feel that there is no use making more resolutions at this, the beginning of another new year. Never mind. It is well that you should be sorry that you did not do better. But last year's failures, if you use your opportunities aright, may be converted into this year's successes. Try and see.

First of all, let us see why you failed. Probably there were many reasons. Did you not, at the outset, overestimate your own strength of will and underestimate the strength of the faults or habits that you desired to overcome? If so, you are better prepared this year and, therefore, should be able to do better.

Next, were you as much in earnest as you should have been. Were you really sorry, deep down in your heart, that you were not living a more consecrated, earnest, conquering life and were willing to strive hard to do better in the future, such as by reading your Bible regularly daily and praying not only once but several times a day, if necessary, to prevent your falling from overcoming you?

Lastly, did you realize that the fight that was before you was spiritual in nature and that it could be won only by spiritual means? If not, there is no reason to wonder why you failed.

It is a good thing to make new resolutions, even if we break them, provided only that we do try to keep them. Our efforts to do better may seem to us to be pitifully weak; their glory, however, lies in the fact that they direct our thoughts and actions in the right direction. They set in operation a great spiritual law which never fails in its operations. This law is that we cannot formulate a desire in our minds to do better without thinking of respects in which we would like to be better. Furthermore, this law ordains that we cannot think and desire to be better without increasing our regret and sorrow for our defects and our longing for the virtue that we lack. This in itself, as surely as night follows day, brings a blessing to us which strengthens and purifies us.

Our desires that we thus receive in exact proportion to the strength of our desires and the earnestness of our efforts to accomplish them. If our desires are weak, human affairs the blessing they bring will be but slight. If they are strong, earnest and sincere the resultant blessing will be great.

When we make new resolutions to live better lives in the future than we have in the past we do what our text speaks about. We put off the old man, with his sins and defects, and we put on the new man, which is made in the image of Christ. The only way in which we can do this is by renewing our minds. That is, we must constantly, again and again, fill our minds with thoughts of what we desire to be and with conceptions of what Christ desires that we should be.

This we can do best by reading our Bibles regularly, as in them God has revealed His will concerning us. And by prayer, for prayer is the means God has provided by which we may obtain the strength and wisdom we need for the accomplishment of our desires. It is thus that we are "renewed in knowledge" after the image of Christ.

In Roman xii:2, we are told to transform ourselves by the renewing of our minds. We do this when we make new resolutions. No matter,

therefore, how many times we may break our good resolutions during the coming year, we must resolve to renew them again immediately. By so doing we will be enabled, by God's help, to transform ourselves, slowly it may be at first, but none the less surely, until the old man has lost his power over us through our increase and knowledge of the Lord.—I. H. N.

Household Hints

Cold rain water and soap will remove machine grease from washable fabrics.

The teapot should be carefully dried after washing keep it sweet.

Before turning out a puddling let it stand three or four minutes for the steam to escape.

Rub the hands with celery after using onions, and the pungent, disagreeable smell will soon disappear.

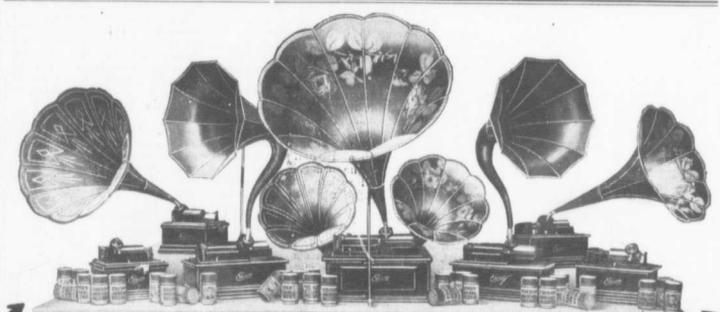
When making coffee in a jug, place the ground coffee in a muslin bag, heat the jug, and use perfectly boiling water.

Choose jugs for household use which are wide enough at the top to allow of a thorough cleansing with the hand or a cloth.

Frozen meat should be gradually thawed by being placed in the kitchen for several hours before it is cooked. If cooked at once it will be tough.

Moths can be prevented in carpets by scrubbing the floor with hot strong salt water solution before laying the carpet and frequently sprinkling the carpet with salt before sweeping.

To clean your rugs put them upside down on bed springs laid down out in the yard. Beat them thoroughly, then turn them over and sweep. This saves the dirt from the ground getting into the rugs.



YOUR CHOICE FREE

Of These Wonderful New Style EDISONS Shipped

Yes, FREE. Shipped positively and absolutely free as per offer below. You do not have to pay us a single penny either now or later. We do not even ask you for any deposit or any guarantee, not even a C. O. D. payment to us. All we ask is that you tell us which of the magnificent Edison outfits you prefer so that we can send that one to you on this free loan offer.

Mr. Edison Says: "I want to see a Phonograph in every American Home."

For the Phonograph is Mr. Edison's pet and hobby. He has worked for years to make this Phonograph exact like others, and now you may obtain any of these wonderful new style outfits on an ultra liberal offer.

Just Take Your Choice You Don't Have To Buy Anything

The Edison Offer I will send you a new model Edison Phonograph and your choice of all the **Acoustic records**, on an absolute no loan—no obligations, no deposit, no guarantee nor C. O. D. to us whatever. I want you to have all the **waltzes, two-steps, vaudivilles, minstrels, grand operas, also the sacred music, etc.**, by the world's greatest artists. Entertain your family and your friends. Give plays to the **songs, solos, duets and quartets**, the **pealing organ, the brass bands, the symphony orchestras, the choirs of Europe's great cathedrals, the piano and violin virtuoso concertos—all these I want you to hear free as reproduced on the Edison phonograph.** Then—when you are through with the outfit—send it back to me—and I will pay the freight.

My Reason: Why should I make such an ultra liberal offer? Why should I go to all this **expense and trouble** just so you can have these free concert of this new instrument. When you get it in your town I know everybody will say that nothing like it has ever been heard—so wonderful, so beautiful, such a king of entertainers—so I am sure you will be one—if not you then somebody else, will want to buy one of these **new style Edisons (especially as they are being offered none at the most astounding rock-bottom price—and on easy terms as low as \$2.00 a month)**. Perhaps you yourself will be glad to keep this outfit. But even if nobody buys I'll be glad anyway that I sent you the new Edison on the free loan—for that is **my way** of advertising quickly its wonderful superiority.



Get Free the New Edison Book

We will send you our handsome new Edison book and full particulars of our wonderful free loan offer absolutely free and prepaid. You should see our grand new Edison book. It will give you the list of the thousands of records and all the machines that you have to choose from. Write today—do not delay. Get the free book and learn about this wonderful free trial offer. Send postal or letter or just the coupon without any letter—but WRITE NOW!

Edison Phonograph Distributors

Address: F. K. Babson, Vice-President and Gen'l Manager
Dept. 7671, 355 Portage Ave., Winnipeg, Canada
 Western Office 6 Post Street, San Francisco U. S. Office Edison Book, Chicago, Ill.

Free Catalog Coupon

Edison Phonograph Distributors

F. K. BABSON
 Vice-President & Gen'l Manager
Dept. 7671, 355 Portage Ave., Winnipeg, Canada
 Western Office 6 Post Street, San Francisco U. S. Office Edison Book, Chicago, Ill.

Without any obligation on the part of the sender we will send you our new Edison Book and full particulars of your new special free loan offer on the new style, improved EDISON Phonograph.

Name _____ DOR
 Address _____

WIPE YOUR FEET



Mad, snow dust and dirt will not be tracked over your floors if you use **Grab's Foot Scraper** outside your door. The only device made which does not foul and does not scratch the floor in paraffin places for so long. It is made of brass and is self-cleaning which makes it suitable for any establishment. It is made of brass and is self-cleaning which makes it suitable for any establishment. It is made of brass and is self-cleaning which makes it suitable for any establishment.

Dealer will not make you, don't be misled by cheap imitations. Write your order direct to us. Illustrated folder FREE. **Onward Mfg. Co., Berlin, Ont.**

You can make Pictures at night

It's all very simple with a **KODAK** and the Eastman Flash Sheets. There's fun in making the pictures and pleasure afterward in possessing pictures of your friends.

Ask your dealer, or write for us for a copy of "By Flashlight," an illustrated book that tells just how to get the best results.

CANADIAN KODAK CO. LIMITED
TORONTO, CANADA

OLD COUNTRY DOMESTICS

Capable Scotch, English and Irish maids; also Danish girls. Parties arriving twice a month. Apply now, The Guild, 71 Drummond Street, Montreal, 47 Pembroke St., Toronto, or 227 Bank St., Ottawa

Montreal Witness

Canada's Best Metropolitan and National Newspaper.

Strong & Courageous

The "Daily Witness" on trial, \$1 regular rate, three dollars. The "Weekly Witness and Canadian Homestead" on trial, 65 regular rate, one dollar. These trial rates are offered to NEW subscribers—those in whose homes neither edition has been taken regularly for at least two years, that is, since it has been so.

Wonderfully Enlarged and Improved

Its circulation is being doubled, and is the most popular paper among church-going people. Its subscribers love it.

Make it Your CHOICE FOR 1912

At the above "Whirlwind Campaign" Rates And tell your friends about this offer. They would also enjoy it. Subscriptions sent in at these rates should either be accompanied by this advertisement or the paper in which you saw the announcement must be named when sending the subscription. **JOHN DUGGALL & SON, Publishers, Montreal.** "Witness" Block, Montreal

Women's Work for the Grange*

Miss H. Robinson, Elgin Co., Ont. December 4th, 1867, was a day momentous in the history of the farmers of America. On that day the National Grange was organized by Mr. O. H. Kelley, with Mr. W. Gauders as master. The Grange, however, with its incomparable ritual, its distinctive and grand declaration of principles, was not the work of a day or an hour. Mr. Kelley had an inspiration nearly two years before, whilst traveling in the South for the government in the interests of agriculture, of what might be accomplished by the organization of the farmers of the country. A farmers' organization having the bond of secretory would build up a better fraternal feeling and cause more united action; such was his conclusion from connection with the Masonic order. **HOW WOMEN CAME INTO GRANGE WORK.** Mr. Kelley mentioned the idea to a few friends, amongst others his niece, Miss Caroline Hat of Beeton, and she suggested that women should be given full and equal rights of membership in the order. From this time Miss Hall took a great interest in the work she wrote much of the degree work for women and compiled the beautiful memorial service. Mr. Kelley says in one of his letters, speaking of Miss Hall: "In regard to my Grange work she is entitled to as much credit as myself, for had it not been for her I should have waited the worst of seasons times during the first four years."

Miss Kimball of the Experiment Gardens, Washington, also assisted Mr. William Saunders in the first work and laying the good foundation of an order that in a few years was to number hundreds of thousands and whose service to humanity can never be estimated.

ROIAL RIGHTS FOR WOMEN

The degree of "Maid" was arranged first, clearly showing that woman was to stand shoulder to shoulder with man in the uplifting of the Patrons of Husbandry. The Grange was the only organization at that time that admitted the equality of women in the lodge room. A lecturer of Fredonia Grange, New York, once said: "This order has served to stimulate and improve the social side of farm life. The social, parliamentary and literary education that has been gained has brightened the life of many a family that would otherwise have been lonely. Above all we have the first order in which the mothers, wives and sisters have every right possessed by their sons, husbands and brothers. Those who doubt the ability of women to vote wisely, and to legislate with equal discretion should join the Grange and have all their doubts removed. I never yet heard a patron lament that every sister in the Grange has not equal equality with himself or express a wish that it might be otherwise."

Brother Luce of Michigan also adds his tribute to the work of women as follows: "No greater boon has ever been tendered to the women of the farm than the Grange offers to them. Their chance for growth, advancement and usefulness comes at last. The Grange room is robbed of its chiefest ornament without her. It is she that arranges the decorations. In a well-conducted hall her handwork is everywhere seen. She, too, inspires impart with a loftier ambition and imbues lessons of refinement. Here certainly is woman's mission."

FROM SMALL BEGINNINGS

In Canada the first Grange was organized in Stanstead, Que., in 1872, by a deputy from the United States. By June 3rd, 1874, there were 115 granges, which entitled them to form a Dominion Grange and work independently of the National Grange. A meeting was held in London on that date and the first Dominion Grange was elected master, with T. W. Dyas, London, secretary, and arrangements were made for holding the annual meeting in Toronto September 22 the same year. The proceedings of this session records that there were nine sisters present and the election of the following officers: Miss L. Caton, Napanee, Ceres; Miss J. B. Palmer, New Durham, Flora; and Mrs. Loosee, Norwichville, Lady Ass't. Steward. Thus ever since its inception women have attended the Dominion Grange, have worked on committees, have assisted in the social functions and have by their presence helped to elevate the discussions. The wives of the delegates have always been warmly welcomed at the Dominion Grange and often friendships have been formed, through associating so intimately the few days of the sessions that have influenced the whole lives of those who on that day to those who spend most of their time in the rural sections and as such is much appreciated.

FOR MUTUAL GOOD
The Grange needs women, and women need the Grange. The initiation ceremony itself declares no one. It only serves as a reminder of the duties of good citizenship. It would be difficult to find more beautiful thoughts or clothed in more impressive language than that of the degrees of the Grange. Every precept is elevating and ennobling. First, the lowly maid with its corresponding admonition. Then as shepherdess, whose sacred duty is to reclaim the wandering and keep them within the fold. Still advancing, she becomes a Gleaner, remembering to glean only the good seed and that our associations in life are the fields in which we reap. Then a Matron, whose she is desired "to wear garlands of nobel deeds, hold aloft her life on earth and let crowns of rejoicing in immortality."

One of These Days

Say! Let's forget it! Let's put it aside!
Life is so large and the world is so wide,
Days are so short and there's so much to do.
What if it was false—there's so much that's true!
Say! Let's forget it! Let's brush it away!
Now let's forever—so, what do you say?
All of the bitter words said shall be praise
One of these days.
Say! Let's forgive it! Let's wipe off the slate!
Find something better to cherish than this!
There's so much good in the world that we've had
Let's strike a balance and cross off the debit.
Say! Let's forgive it, whatever it be;
Let's not be slaves when we ought to be free.
We will be walking in sunshiny ways
One of these days.
Say! Let's not mind it! Let's smile it away!
Bring it and a whiter rose from yesterday;
Flowers are so fresh by the wayside and wood,
Sorrow are blessings but half understood;
Say! Let's not mind it, however it seems;

Hope is so sweet and holds so many dreams,
All of the sere fields with blossoms shall blaze
One of these days.

Say! Let's not take it so sorely to heart;
Fates may be friendships just drifted apart;
Failure be friendships not quite understood;
We could all help folks so much if we would!

Say! Let's get closer to somebody's side,
See what his dreams are and know how he tried;
Learn if our seedlings won't give way to praise
One of these days.

Say! Let's not wither! Let's branch out and rise
Out of the byways and nearer the side;
Let's spread some shade that's refreshing and deep,
Where some tired traveler may lie down and sleep.

Say! Let's not hurry! Let's do it right now!
So much to do if we just find out how
We may not be here to help folks or praise
One of these days.

THE COOK'S CORNER

Recipes for publication are requested. Inquiries regarding recipes, etc., gladly answered upon request, to the Housewife, Ottawa, Farm and Dairy, Peterboro, Ont.

CHEESE FRITTERS

Ingredients—About a pint of water, a piece of butter the size of an egg, the black piece of cayenne, plenty of black pepper, 1-4 lb. of ground Parmesan cheese, whites of two or three eggs, and yolk of two eggs, salt to a froth, salt, flour. Put the water into a saucepan with the butter, cayenne and black pepper. When the water boils turn gradually into it sufficient flour to form a thick paste; then take it off the fire and work into it the Parmesan cheese, and then the yolks and whites of the eggs. Let the paste rest for a couple of hours and proceed to fry by dropping pieces of it the size of a walnut.

PINEAPPLE CREAM

Ingredients—A tin of preserved pineapple, six ounces of sugar, ½ pint of water, six ounces of best French gelatine dissolved in a little milk, one pint of cream. Pound the pineapple in a mortar, add the sugar and water; boil for 15 minutes and press through a sieve. Dissolve the gelatine in a little milk; whip the cream to a froth; mix the gelatine with the pineapple pulp, then quickly work in the cream. Pour the mixture into a mold, and put on ice to set. When wanted, dip the mould in hot water and turn out the cream.

SWISS ROLLS

Ingredients—Two eggs, their weight in flour and sifted sugar and butter, one egg, one ounce of best French gelatine dissolved in a little milk, your weights and take their weight in flour, sifted sugar and butter. First cream the butter and sugar, stir in the two yolks slightly beaten, then the two whites beaten to a stiff froth, and last of all the flour, strain lightly in; mix thoroughly, and add a little lemon juice. Grease a Yorkshire pudding tin and pour in the mixture, about half an inch in depth; bake in a hot oven for not more than seven minutes, or otherwise it would become too crisp & so roll; when it shows a pale color and immediately turn it out on the tin, and quickly roll it; if not done while very hot, it will break in the rolling.

Ja
Som
No in
into th
er or
a pa
the cr
social
A w
by a f
scrip
down
views
old say
the cr
world'
to real
in the
power
tage ar
whom
To s
ence in
read h
men to
things
woman
been t
GRA
THRO
AND
Betwe
PO
NORTH
Porec
SOUTH
Porec
Toront
WINNI
15
Steam
Ma
No
We
A B
ones
tions.
This
See
horns a
Get his
us, see
we will
In ost
boots
extreme
FARM

Woman's Influence

Some time ago I heard a woman say, "I've no influence; I wish I had." No influence! Every one who is born into this world has influence of greater or less degree. You cannot meet a person, talk with her, be with her, without being in some way, subconsciously, perhaps, influenced.

A woman can do more in this world by a few words at the right time, by example or sympathy, than by laying down the law and proclaiming her views from a public platform. The old saying that "the hand that rocks the cradle is the hand that rules the world" is true, and woman should try to realize what that influence means in the lives of others and use this powerful weapon to the best advantage and to the uplifting of those with whom she comes in daily contact.

To see and realize woman's influence in the world you have only to read history and the lives of great men to find that all the really big things in life have been the result of woman's influence or that woman had been the inspiration for the deeds

that so often won fame and glory to some great man. There is not a page in the history of the world that is not marked by woman's influence in some degree. The finest poems, epics, sagas, military victories, political victories, have had woman's influence at the lack of them.

A mother's influence over her children, a wife's over her husband, a sister's over her brother, a mistress's over her servants, is greater far than one supposes. And if this influence be used for good what a grand and heroic thing it is!

On the other hand this same weapon used for evil becomes the most deadly thing in the world, and, alas, history has not seen the overthrow of Empires and the downfall of Emperors due to the evil influence of some bad woman?

Even though we may not have enough influence to inspire great things we can use this power in our daily life for good. In our homes, in public life, in whatever sphere we are placed let this influence be a ray of sunshine falling from us for the greater good to those whom it reaches.—Jane Dare.

Fighting Disease through Cleanliness

Mrs. P. C. Orer, Hamilton, Ont. You could cast your eyes back as I can to the prehistoric man when he captured his mate, clubbed her on the head and dragged her to his cave; when she would emerge from unconsciousness she would find that the man had gone out to get meat (they always have to eat you know), and as she looked around the terrible looking in caves, that she had been dragged into, her first impulse, if she was a woman such as I imagine our prehistoric ancestors must have been, she would tidy up.

She would probably put things in order in the best way she could; and casting my eyes back to that prehistoric household, I can distinctly see that prehistoric wife a few months after, when she has got the man where she wants him, when he brings back a pachydermatid, one of the prehistoric animals, to eat, she would say, "I wish you would scrape your dirty toes outside and not come in musing up the floor of this cave," and don't you suppose she would have a hint ready for him to scrape his feet so that the cave would be kept in order? Don't you think the first impulse of our ancestors, who lived in these prehistoric caves, was to keep out the dirt, and by keeping out the dirt to keep out the germs? I do.

And I am perfectly convinced that it is the ages since then up to the present moment when the man grumbled about having to wipe their feet, they did not think, perhaps, that they were keeping out millions of germs from their own homes. They simply thought it was a fad of their wives, so, also, I think it has been in the spring house cleaning, and they always will. Women will have their house cleaning, cost what it may. All this is the natural impulse of woman towards cleanliness and order and they are doing their part in the scheme of creation and doing it very well.—Extract from an address.

Culture and industry.—"We are always in these days endeavoring to separate intellect and manual labor; we want one man to be always thinking and another to be always working, and we call one a gentleman and the other an operative; whereas the workman ought often to be thinking, and the thinker often to be working, and both should be gentlemen in the best sense. As it is, we make both ungentle, the one envying, the other despising his brother, and the mass of society is made up of morbid thinkers and miserable workers!"—John Ruskin.

Embroidery Designs

Designs illustrated in this column will be furnished for 10 cents each. Readers desiring any special pattern will confer a favor by writing Household Editor, asking for same. They will be published as soon as possible after request is received.



617 Design for an Embroidered Doyley Six Inches in Diameter Six transfers are included in each pattern



611 Design for an Embroidered Pillow Top Seventeen Inches Square.



906 Design for Motifs to be used in Various Ways. Adapted to Brazil, Beads, French Knits, Outline and a-lid embroidery. One large and six smaller motifs are given.



614 Design for Embroidering Sprays of Forget-me-nots. Suitable for lingerie blouses, children's dresses and for all objects for which small flowers are appropriate.

The Sewing Room

Patterns 12 cents each. Order by number and size. If for children, give age. For adults, give bust measure for waists, and waist measure for skirts. Address all orders to the Pattern Department.

FANCY BLOUSE WITH RIMON SLEEVES SET IN 7234

The blouse that is made of two materials is a favorite this season. Here is a model that gives the effect of the guimpe beneath but which is simply made over a foundation lining, this lining being faced beneath the opening and to form the yoke.

The medium size will be required 3 1/2 yards of material 27, 2 1/4 yards 36, 1 3/4 yards 44 inches wide, with 1 1/4 yards 27, 1 1/4 yards 36 and 1 3/8 yards of all-over lace 18 inches wide for the facings and under sleeves.

This pattern is cut in sizes for 34, 36, 38 and 40 inch bust measure.

FANCY BLOUSE FOR MISSSES AND SMALL WOMEN, 7235

Here is a waist that can become simple and pretty after the manner illustrated or elaborate as it is made of one material or two. The rimons sleeves are joined to the blouse well with the line, and if they are made of all-over lace, of velvet or other contrasting material, the effect becomes quite a different one.

The fronts and backs of the blouse are cut in one. They overlap and are arranged over the deep Y-shaped yoke. The sleeves are joined to the big armholes. When short sleeves are desired, they are cut off on the line indicated in the back view, and when full length sleeves are wanted extensions are joined to them.

For the 16 size size will be required 3 1/4 yards of material 27, 1 3/4 yards 36, 1 1/4 yards 44 inches wide with 3/8 yard of tucking 18 inches wide for the yoke, and 1/2 yard of material for the V-shaped portions and cuffs.

This pattern is cut in sizes for misses of 14, 16 and 18 years of age.

GIRL'S DRESS, N. 7233

Sleeves that form a part of the blouse yet are joined to the main portions are exceedingly fashionable for school girls as well as for their elders. This dress shows them and also includes the missing part on the left of the front that is new and smart and practical.

For the 12 size size will be required 6 yards of material 27, 4 3/4 yards 36, or 3 1/4 yards 44 inches wide with 2 1/2 yards 27 inches wide for collar, cuffs and shield.

This pattern is cut in sizes for girls of 10, 12 and 14 years of age.

When cane seats become slack they are uncomfortable and unsightly. Sponge both sides of the cane thoroughly with hot soap-suds, in which a handful of salt has been dissolved. Then stand the chairs in the open air and when the top of the seat is fairly dry cover it with a cloth, and iron with a hot iron. Treated like this the seats will become as firm as when new.

GRAND TRUNK RAILWAY SYSTEM

THROUGH TRAIN SERVICE AND PULLMAN SLEEPERS

Between TORONTO and

PORCUPINE

NORTHBOUND—First train leaves Toronto 1:30 p.m. Dec. 2nd, arriving South Porcupine 4:30 p.m. following afternoon.

SOUTHBOUND—First train leaves South Porcupine 12:30 p.m. Dec. 3rd, arriving Toronto 7:30 a.m. following morning.

The Attractive Route to

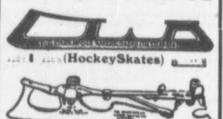
WINNIPEG AND WESTERN CANADA

IS VIA GRAND TRUNK AND CHICAGO

Steamship tickets on sale via all lines. Make your reservations early.

Full particulars from Grand Trunk Agents.

Not One Boy need be Without Skates



(Spring Skates) Your Choice

of either Hockey or Spring Skates in return for only one NEW subscription to Farm and Dairy taken at only \$1.00 a year.

A better pair of Nickel-Plated ones—for only two NEW subscriptions.

Girls!

This Offer is for You, Too See one of your father's neighbors after School or on Saturday. Get him to subscribe. Then write us, sending the subscription, and we will send the skates.

In ordering skates send the size of the best in inches from the extreme heel to the extreme toe.

FARM AND DAIRY, PETERBORO, ONT.

ERNER requested. recd. request, to send Dairy.

nt of water. of an egg. plenty of ground. Parvo or three rest. water into a cayenne and white boils. Efficient floor. hen take it in the Parvo yolks and in the paste and propices of it.

preserved gar, 1/2 pint best French milk, one pineapple in and water; sea through machine in a to a froth; a pineapple in the cream. then wanted, dip and turn out

their weight and butter, two eggs as their weight. First gar, stir it eaten, then stiff froth. crown lightly add a little ashire pieces necessary; bake in a seven-min. become 3-9 pay r out on this. with jar, done while the rolling.

OUR FARMERS' CLUB

Correspondence invited. See H. M. PRINCE EDWARD ISLAND KING'S CO. P. E. I.

CARDIGN BRIDGE, Dec. 22.—We are having the finest winter so far that we have had for years; no snow to speak of. Roads are hard, and in good condition for hauling. Vessels have all cleared from here but could probably stay for another week without getting caught. Prices for produce were good, and shipping was brisk. Poultry is high; turkeys from 19c to 25c; geese, 15c to 14c; chickens, 10c to 16c. A local butcher here, Mr. Allan Shaw, has shipped over 600 carcasses of mutton to Halifax this fall. Beef is low at 5c to 6c dressed; pork, 7 1/4 to 7 1/2c dressed; hides, 10c to 14c. Our provincial election takes place on January 4.—H. P.

QUEBEC

SHERBROOKE CO., QUE. LENNOXVILLE, Dec. 23.—Winter weather is not much in evidence; very little

now so far. Cattle of all kinds are cheaper and hay is much heavier, selling at 80 and 81¢. Corn is 30¢. Potatoes are 8c to 9c, which leaves a very narrow margin for profit, while feed is so high. Butcher retailing, 25c.—H. M.

COMPTON CO., QUE.

COMPTON, Dec. 27.—We are having rather poor weather so far this winter, with frequent thaws, which obliges us to keep our wagons again. Pork continues cheap and feed is still very dear. Eggs are scarce and very high, being 40c to 50c and some places more. Hens seem to be on strike.—D. O. C.

ONTARIO

GREENVILLE CO., ONT.

CHARLEVILLE, Dec. 25.—The weather is very changeable, with rain and snow. We are pretty well up with our fall work. A few choice cherries are running very well. Bran, 85c; shorts, 87¢; gluten meal, 85c; oats, 40c to 60c; greens, 25¢; turkeys, 18c to 20c; eggs, 35c to 40c; butter, 25c to 30c; chickens, 75c to 1.15 a pair; hay, 81¢ to 81 1/2.—W. C.

HALIBURTON CO., ONT.

KINMOUNT, Dec. 21.—Up to Dec. 8 we had fine Canadian winter weather; bright, mild days, just cold enough to make the air exhilarating. Cattle went into winter quarters in good shape. Feed is fairly plentiful. An unusually large number of sheep have been wintered over. A large quantity of beef cattle have been sold at the logging camps. Hay, 81¢; oats, 40¢; peas, 81¢; potatoes, 1.30 a bag; chickens, 14c; turkeys, 20c; geese, 15c; butter, 30c; eggs, 30c.—A. S. E.

WELLINGTON CO., ONT.

QUELPH, Dec. 22.—We are having mild weather. There is little snow left on the fields. The outlook for clover next year is not very encouraging. The freezing and thawing of the new meadows will tend to weaken the stand of clover which is already scanty on account of the dry season of 1914. Alfalfa fields have already suffered from sheets of ice this winter, which will now have to contend to kill out as it did last spring. Thoroughly drained land is suffering least. About 10 per cent of the usual number of cattle are being fattened as feed is scarce, and high priced Butter and eggs are selling at record prices. Poultry still coming into the market plentifully, as this is a leading sector in poultry production.—C. N.

DURHAM CO., ONT.

PORT HOPE, Dec. 28.—Our district representative, Mr. E. S. Duncan, is planning to conduct a course in agriculture in our High School, Jan. 15 to Feb. 2. Mr. Duncan informs us that all sides of farming, from the production of crops to their marketing will be in these courses. Mr. Duncan is assisted by Mr. H. S. Fry, of the Ontario Agricultural College, and we are hoping that lots of our Durham and Northumberland boys will take advantage of these courses.—F. F.

ESSEX CO., ONT.

ARNER, Dec. 21.—The incessant rains, together with the mild weather, has made the roads almost impassable. The oldest plantations never get so much wet and mud at this time of the year. Stripping tobacco and attending to the stock constitutes the farm work at present. Large quantities of hogs have been shipped from here the last few weeks. Prices are: Hogs, 55c; wheat, 85c; corn, 56c; oats, 42c; hay, 81¢; chickens, 10c; turkeys (alive), 4c to 5c; geese, 10c and 8c, 8c to 10c; eggs, 30c; butter, 35c.—A. L. A.

WYOMING, Dec. 27.—We are having a dry day, but it is freezing. We have had weather for a month. Young horses are still running out. We had some very cold weather early in November and since that time there has been little talk of scarcity of feed now. The butchers say all kinds of fat stock and cows are "faded" and the quality of stock is very high, but good seed with a little buckhorn in it can be got for 89. We have a large amount of clover seed, except the loss on clover seed. The horns

market is quiet. Horses do not seem to be done much, but are not moving very fast. The dairying is making very little progress, although most of our farmers have silos; the trouble is that the silage is not so good. Lactation has gone down! down! down! And yet the grain buyer, banker, cream dealer, politician and the farmer himself are having a gay time of it are settling the farmer on the back and letting him be a party to it. It is not until January, at least last November. But lately we have been told by the same parties that "we would not make the farmer better off, the production of wealth will not increase.—D. N. A.

SPINNING CO., ONT.

COCHRANE, Dec. 19.—The weather has been unusually mild during the past 14 days, with the exception of yesterday, when the thermometer fell to 6 degrees below zero. Prices of feed stuffs remain unaltered, excepting oats, which are slightly higher. Butter (creamery), 40c; potatoes, 81.85. About 40,000 acres of Crown lands have been taken up in this district since February last.—S. M.

BRITISH COLUMBIA

NEW WESTMINSTER DIST., B.C.

CHILLIWACK, Dec. 15.—We are having fair weather here, but just a little rain now and then. Stock is looking well. The grass is coming along after the last cold spell. Prices: 60¢; butter, 10c; chickens, 17c; ducks, 15c—scarce and that; geese, 22 each; turkeys, 25c.—J. C.

AYRSHIRE NEWS

Farm and Dairy is the recognized exponent of the dairy interests of Canada. The Ayrshire Cattle Club, of all members of the Canadian Ayrshire Breeders' Association are invited to send notices of interest in Ayrshire breeders for publication in this column.

ALEX. BIME'S AYRSHIRES

In a recent letter to Farm and Dairy, Mr. Alex. Hume, Mont. Ont., writes: "Our herd is now in fine condition, showing more quality than ever, and putting up a record. This is due to the fact that in an exception that the cows test less than four per cent butter fat even when fresh. Most of the cows are from the famous registry and several of the sires used are now eligible. The two heifers illustrated elsewhere are a sample of the stock bred. We also bred and owned a female that was two years in succession the senior and grand champion at Toronto against the best that could be imported. We have several young bulls on hand for sale and could fill an order or two for aged bulls that have proved good sires. We always have on hand females of any desirable type and can furnish any number up to ear lots. "We also have a few Yorkshire of either sex of different ages. Visitors or intending purchasers are met at Horkiss's Station and are always welcome."

CHAMPION AYRSHIRE HERD

(Concluded from last week) Recent sales by Mr. Hume have made, include a heifer calf out of Scotland Princess, a half-sister to the four-year-old champion cow, which has gone to Mr. Jas. Beag, of St. Catharines, a bull calf from Beauty of Craigdale to Mr. Will Hammond, of Cainsville, a bull calf to Mr. Will Hume, of Wainland, a heifer calf from Blossom of Springbank, a prize-winner at the Toronto Exhibition, to Mr. W. D. Munn, of Toronto, and a bull calf from the great cow Snowflake, to Mr. G. D. Modin, of Vankeek Hill; a yearling bull from the same dam, to Mr. J. H. Snow Flake, to Ernest McCook, of Campbellford, and a bull calf from Canada Princess, to Mr. J. H. Snow Flake, B.C. These last three bulls have both quality and breeding, and will prove good sires. The cows in which they are to be used. There are still a number of excellent bull calves ready for sale, including the dam of the four-year-old record cow, Scotland Princess, one from Briery dam of Springbank, two related to Speck of Springbank, and several others.

A WELL KNOWN HERD OF AYRSHIRES

One of the oldest and best known herds of Ayrshire cattle in Canada is that of Mr. James Benning, Glenhurst Farm, Williamson, Ont. This farm was well established clearly by the buyers that were attracted, and the prices that were realized at the auction sale of the quality of Ayrshires that was held at this farm a few years ago, when 21 head of pure bred Ayrshire cattle were sold; that of some of the foundation herd was retained, not being placed on the market, and since then, the addition of young stock and the careful dairying is resulting in a good animal, a strong herd has been developed. Recently an editor of Farm and Dairy has been very complimentary in his remarks, pleased with the quality of the stock, and evidence. The herd comprises about 500 head of pure bred Ayrshires, including some females, all fresh, which is a record for the first of the year. The animals in the herd comply to an unusual degree of constitution, and are of a high standard of type. In this regard the herd is exceptional. The stock is mostly white and nicely marked. Glenhurst Flosie, three years old, is an animal hard to fault. Her head shows the Ayrshire characteristics so much desired by good Ayrshire breeders. The muscles are large, the eye prominent, the face flat, shaped and broad and the horns small and curved. She has a beautiful neck, the blends nicely with the shoulder. The withers are clean, her top and under lines are about perfect. She shows great constitution. The udder is excellent in position. She is a nice, good bred, well placed heifer. This is a good bred heifer throughout—almost all white in color, and an animal which, at her age, is a credit to the farm. The dam of the heifer sold to Mr. Ryan for \$500 is a two-year-old, Glenhurst Flosie is her dam. Her dam is a fine animal, evidence of Mr. Benning's success as a breeder. "White Ada, of Glenhurst, three years of age, is an animal which is very similar to much the same character. Besides having great length and depth, she has a grand back and strong and muscular shoulders and lots of lung room. She is clean cut in front, and widens out to a great degree. For a heifer she possesses exceptional qualities. This animal is one of the best in the herd, which says a great deal. "One of the matrons of the herd is Flosie of Glenhurst, 997. Being in her fourth year, she is commencing to show the qualities which will make her a good Ayrshire type. She has a large broad frame, prominent milk veins and a well formed udder. "Torry Cons, Imp., was purchased a Hunter's sale. She is in her fourth year, and is a fine animal, weighing over 40 lbs. of milk a day in a cold stable after freshening, with three teats. She is a fine animal, and is a good milk producer and promises to make some good records. "White Moll, of Glenhurst, a two-year-old heifer, while not possessing all the good points of Glenhurst Flosie and Torry Cons, is a very fine young animal, with a nicely ribbed body that shows her splendid constitution. She is from a dam that is a fine animal, and is a good milk producer. Glenhurst Blossom, another three-year-old, might be faulted slightly about the udder, but is a fine animal. She shows a strong back, a broad quarter, and the true wedge shape and good depth. She is out of one of the foundation cows of the herd, Williamson's Earl, 7036, now 8 years old, bred to freshen in March. The cow shows a long time, has been bred before the public, and is a good type throughout, and as straight in the back as a heifer. She has been a valuable milk producer, and is a good milk producer of a number of good animals. "Lady Ada, another matron of the herd, is a fine animal, and is a good type of Glenhurst. She is a grand type of cow and shows most of the points possessed by the other matrons of the herd. She has a great middle, a large, pendulous udder, fed by superb milk veins. "White Hope, a two-year-old heifer, is a long, low, deep type of heifer so much desired. She is almost all white, and comes to a good type. "Ruth the 3rd, of Glenhurst, another matron, is the dam of White Moll. She is a fine animal, and is a good type in color, and possesses the hardy constitution and vigor that has been a feature of the Ayrshire breed. She is a true wedge shape, narrow in front and broad behind, and possesses a splendid constitution, and an unusual form throughout, furnished with large, deep shaped teats. This cow is a splendid animal. "The young stock of the herd include a heifer calf out of White Ruth, and the herd bull, which, though only in his first year, is a fine animal, and is a good type in shape and depth of the best Ayrshire type. "Another fine heifer calf was seen, on White Ada. There were also three fine bull calves by the herd bull; one is a heifer calf, one is a cow, and one is a bull. O. A. C. Guelph, for \$400, where she has made a good record (Continued next week)

POTASH MEANS PROFIT

¶ The question of Fertilization can no longer be ignored by our farmers. MAXIMUM crops must be grown to make farming PROFITABLE.

¶ POTASH as an ingredient of a "Complete Fertilizer" is profitable ON ALL CROPS and can be obtained from all leading fertilizer dealers in the highly concentrated and readily available forms of

Muriate of Potash AND Sulphate of Potash

¶ Write now for information on this important subject and copies of our free bulletins including:

- "Artificial Fertilizers: Their Nature and Use"
"Potato Crop in Canada"
"A Farmer's Field Tests"
"Farmers' Companion" Etc.

The Dominion Agricultural Offices OF THE POTASH SYNDICATE 1105 Temple Bldg., Toronto, Ont.



PERFECT Maple Evaporator

Price low—quality high—retains the best possible—the kind you like syrup—its maple taste—all unnecessary expense and middlemen's profits out. Sold at the lowest price and with the guarantee. Test. Write for pamphlets and recommendations. Do not miss.

Steel Trough & Machine Co., Tweed, Ont.

HOLSTEINS

Centre-Hillview Holsteins

Head headed by Sir Sadie Cornucopia... 275 1/2 lbs. milk and 11 1/2 lbs. butter in 30 days...

We own the Champion of Canada... also female, all aged, with official backing.

P. D. EDE

Oxford Centre P. O., Ont. Long distance phone. Woodstock Station.

A Great Combination

Bulls, eight months old, for sale, combining the blood of Pontiac Korndyke and High Five 35th...

A. A. FARWELL, OSHAWA, ONT.

LAKEVIEW HOLSTEINS

Bull calf born March 21st, 1911, sired by Count Henevield Payne De Kol and out of Rose Kattler...

PENINSULA FARM HOLSTEINS

Young bulls for sale from Record Merit cows and Winter Fair prize winners.

H. T. PATTERSON, ALFRED JCT., ONT

AVONDALE FARM HOLSTEINS

Arthur C. Hardy, Prop.

We offer bull calves, all ages, and all out of tested dams. One is a son of Sir Johanna Colantha Glad...

H. LORNE LOGAN, Manager Brockville, Ont.

FERNDALE STOCK FARM

Clydesdale Horses and Holstein Cattle were never stronger than now. We have 4 or 5 bulls from Korndyke King Scholtz...

HOMESTEAD HOLSTEIN HERD

Home of Helbon DeKol, Canadian champion cow for 7 and 30 days, was 1 1/2 lbs. butter in 7 days, 129 1/2 lbs. in 30 days...

E. LAIDLAW & SONS, AYLMER WEST, ONT.

DAIRY PRODUCE

The market for butter is very strong at the same quotations as closed last week. Dairy prints, 26c to 27c; creamery prints, 16c to 17c...

HORSES

Quotations on the market are: Heavy drafters, \$175 to \$300; medium weight, \$170 to \$200...

LIVE STOCK

The receipts of live stock this past week would be expected are the smallest for a long time. Monday being Christmas, no market was held...

Which cows are in good demand at \$40 to \$50; cow and med. \$30 to \$40, and springers, \$40 to \$75...

MONTREAL HOG MARKET

Montreal, Saturday, Dec. 30. The market here is small, a very firm, and well maintained, the offerings this week...

EXPORT BUTTER AND CHEESE

Montreal, Saturday, Dec. 30. The market for cheese is very firm, and prices have advanced owing to the exceedingly good demand from the other side during the past few days...

HOLSTEINS

HOLSTEIN BREEDERS' CLUB

BELLVILLE DISTRICT WILL HOLD

SECOND ANNUAL CONSIGNMENT SALE

Belleville, Ont., April 3, 1912 For information apply to F. R. Malory, Sec.-Treas.

Lyndale Holsteins

Offers two young bulls born September, 1910, one of them from a tested daughter of Brightland Canary...

BROWN BROS., LYN, ONT.

FOR HOLSTEIN BULL CALVES

Sale of bull calves, 2 & 3 years old, some dams average 27 lbs. of butter in 7 days...

stocks in store here now will not amount to much more than half the total in store at this time...

GOSSIP

WHERE TO GET GOOD SEED BARLEY Seed barley of first quality is a scarce article, and while this year...

HOLSTEINS RECEIVED IN RECORD OF PERFORMANCES

Aaggie DeKol of Woodland (10413), two-year-old, total production of milk, 11,694.5 lbs.; average per cent. fat, 3.1; days in milk, 365...

CITY VIEW AYRSHIRES

R. O. P. cows and two-year-old bull for sale, one rearing bull and a fine lot of 1911 bull calves...

Ayrshires and Yorkshires

FOR SALE—High class Ayrshires, 2 cows, including three bulls fit for service. Yorkshire pigs all ages...

THE SPRINGBANK HERD OF AYRSHIRES

Contact me for names of the best Ayrshire butter producers than any other herd in Ontario...

Ayrshires

World's Champion herd for milk production. Some young bulls and heifers, all from R.O.P. cow for sale...

Burnside Ayrshire

Winners in the show ring and districts. Animals of both sexes, Imported or Canadian bred, for sale.

HOLSTEINS

HOLSTEIN CATTLE

Purchased Registered Holstein Cattle. The Greatest Dairy Breeders' Association of the World...

Summer Hill Holstein

Present offering: 15 yearling heifers, 10 imported heifers (some bred), 1 calf from a 2 1/2 lb. dam, 1 bull calf from a 29 1/2 lb. dam...

A REMARKABLE RECORD

While visiting recently at the farm of Messrs E. Laidlaw and Sons, Aylmer, Ont., the editor of Farm and Dairy...

AYRSHIRES

AYRSHIRES We have on hand a very healthy young bull, good type for 100 lbs. of milk...

RAVENSDALE AYRSHIRES

Special offering of pure bred Ayrshires. Young Bull, 10 months old, 12 months old, 18 months old...

CHOICE AYRSHIRES

One bull 11 months old, one 9 months old, two Feb bull calves—grand ones from R.O.P. cows...

CITY VIEW AYRSHIRES

R. O. P. cows and two-year-old bull for sale, one rearing bull and a fine lot of 1911 bull calves...

Ayrshires and Yorkshires

FOR SALE—High class Ayrshires, 2 cows, including three bulls fit for service. Yorkshire pigs all ages...

THE SPRINGBANK HERD OF AYRSHIRES

Contact me for names of the best Ayrshire butter producers than any other herd in Ontario...

Ayrshires

World's Champion herd for milk production. Some young bulls and heifers, all from R.O.P. cow for sale...

Burnside Ayrshire

Winners in the show ring and districts. Animals of both sexes, Imported or Canadian bred, for sale.

HOLSTEINS

HOLSTEIN CATTLE

Purchased Registered Holstein Cattle. The Greatest Dairy Breeders' Association of the World...

Summer Hill Holstein

Present offering: 15 yearling heifers, 10 imported heifers (some bred), 1 calf from a 2 1/2 lb. dam, 1 bull calf from a 29 1/2 lb. dam...

A REMARKABLE RECORD

While visiting recently at the farm of Messrs E. Laidlaw and Sons, Aylmer, Ont., the editor of Farm and Dairy...

Vertical text on the right edge of the page, including 'HOLSTEINS', 'AYRSHIRES', 'YORKSHIRES', 'RAVENSDALE AYRSHIRES', 'CHOICE AYRSHIRES', 'CITY VIEW AYRSHIRES', 'Ayrshires and Yorkshires', 'THE SPRINGBANK HERD OF AYRSHIRES', 'Ayrshires', 'Burnside Ayrshire', 'HOLSTEINS', 'HOLSTEIN CATTLE', 'Summer Hill Holstein', 'A REMARKABLE RECORD'.

LET US SHOW YOU HOW EASILY YOU AND YOUR NEIGHBORS CAN HAVE A TELEPHONE SYSTEM OF YOUR OWN

YOU—you and your neighbors—would have a telephone system for your own community, if you only realized how easily you yourselves could construct it and get it going. If you knew, in detail, how you and the people around you could form, own and control a local, self-maintaining company, for your own use and convenience, you would have such a system. There would be a telephone system in your community to-day if you knew how easily you and your neighbors could build every foot of the line and install every instrument yourselves—and especially if you realized that you do not need very much capital to do it either. Now, there is no reason why you should not know all these facts; for we stand ready to give you, for the mere asking, every bit of this information, provided only that you are sufficiently interested in the subject to write and ask us for it.

We
Send
This
Book

FREE

But
Only
On
Request

HOW to Build Rural Telephone Lines," is an illustrated, cloth bound book of one hundred pages, full of a carefully indexed mass of information on rural telephones. This book tells everything; with it before you, you can organize your own company and construct your own line. It tells you absolutely everything you need to know, step by step, as you go along. There is no other book in existence that deals so thoroughly with every vital, essential fact. Remember, this book has cost a lot of money and careful study to prepare. We really ought to charge for it. However, we send it free on request—but ONLY on request. To get it you have to send us the coupon and thus signify that you are really interested. The book is too valuable to distribute haphazard.

Send
Us The
Coupon
Now

The
Northern
Electric and
Manufacturing
Company
Limited

Gentlemen:
Please send me FREE, one copy of your 100 page, bound and illustrated book on "How to Build Rural Telephone Lines." 236 160

Name.....

Post Office.....

Province.....



Montreal

We Will Explain All About Rural Company Organization

YOU do not need experience to organize a telephone company in your own community, when you have our book. It tells you exactly what you have to do and how to do it. All you need to do is to follow the instructions that the book gives and then get out and interest your neighbors. Whether you want to organize a mutual or a stock company, the book will tell you how.

You And Just Your Own Friends Can Build Every Foot Of Line

BUILDING your own line keeps down construction costs. With the help we give you, you do not need to employ expert fitters. The book explains the last word in line construction and contains, in this one chapter alone, thirty-seven diagrams and illustrations, showing how to make every kind of connection necessary, how to route the line, how to put the fittings on the poles, how to guy the poles, how to place the insulators and string the wires—in fact, how to handle every detail as well as an expert lineman can. On request, we will also tell you of your provincial regulations, what your government requires and what it will do to help you.

The Cost To Operate Your Own Line is Low

YOU can readily understand that when you and your friends have the entire management in your own hands, you can regulate the cost of running the line. In the book we explain just exactly what is necessary and you can take your pencil and figure out how little it will cost you to have a telephone on the wall in your own house.

THE **Northern Electric**
AND MANUFACTURING CO. LIMITED.

Manufacturer and supplier of all apparatus and equipment used in the construction, operation and maintenance of Telephone, Fire Alarm and Electric Railway Plants. Address our nearest house

236

Toronto Winnipeg Regina Calgary Vancouver



The Northern Electric is the instrument on the wall of nine out of every ten telephone users in Canada.

Let Us Explain To You How To Interest Your Neighbors

THE first step in getting started, is to enthruse your neighbors and get them all in with you. When you have read "How to Build Rural Telephone Lines," you will have a mass of information at your finger ends that will enable you to place positive, definite facts before your friends, to enthruse them with the idea of a self-maintaining, community owned system and to make everybody around you anxious to help. All it needs to get a telephone system started, is for one progressive man to start the ball rolling. With the information that we place at your command, you can get everything organized in short order.

There Will Be A Telephone System In Your Locality—Get Posted

SOONER or later someone is going to start a telephone system in your community, just as systems are being started every day in farming communities throughout the Dominion. When the subject comes up, you will want the particulars before you. Now is the time you to post yourself. The book tells everything and, if you are interested, we will be glad to send it to you. Do you care to sign the coupon and get it to us now?