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NUMBER 6

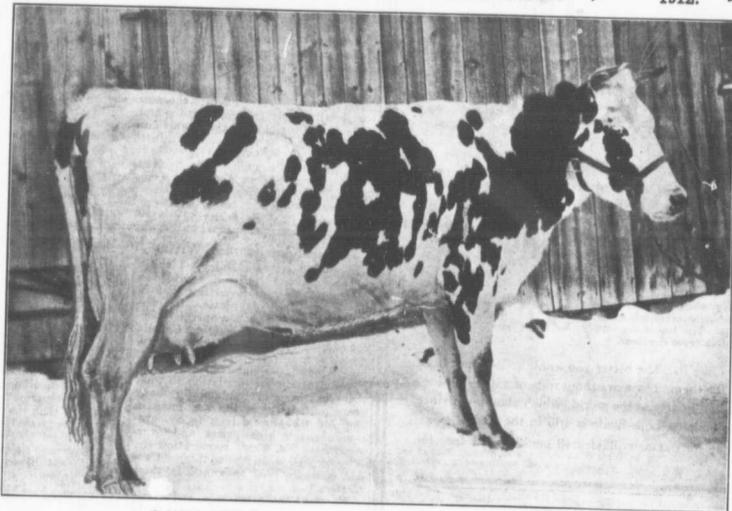
FARM AND DAIRY

RURAL HOME

PETERBORO, ONT

FEBRUARY 8

1912.



A NEW WORLD'S RECORD HEIFER FOR MILK PRODUCTION

What is believed to be a new world's record in the production of milk for a heifer was completed recently by the great heifer Lulu Keyes, No. 10,333, here shown, owned by E. B. Mallory, of Frankford, Ont. Lulu Keyes at the commencement of her test was 2 years and 11 months old. At the start in a seven day test, she produced 585 lbs. of milk and 21.85 lbs. of butter, and in a 30 day test 2,344 lbs. of milk and 87 lbs. of butter. Her best day's record was 91 2-10 lbs. of milk. This is believed to be the highest for her age. Her persistence as a milker is shown by the fact that during the course of the year ending January 10 last she produced 19,250 lbs. of milk. Her record for butter production has not been announced by the Government. It is believed to be between 700 and 800 lbs. The best previous record for milk production in the Record of Performance for an animal of her age was 16,800 lbs., and in the United States 19,193 lbs.

DEVOTED TO
BETTER FARMING AND
CANADIAN COUNTRY LIFE

What Do You Know

ABOUT

CREAM SEPARATORS?

Do You Know that every important mechanical device has its imitators?

Do You Know that the Simplex Link-Blade Separator has its imitators?

Do You Know that the Simplex is the only separator having the self-centering bearings?

There is considerable you ought to know about separators, and the better you know



The Simplex Link-Blade Separator

Note the heavy, compact, construction and convenient height of supply can and discharge spouts. The top of the supply can is only 3 1-2 ft. from the floor.

the better you like it. The better you know some separators the less you like them. There are thousands of satisfied SIMPLEX users in all parts of the world, which should convince you that The Simplex Link-Blade is still in the lead.

Send to-day for our new illustrated booklet: it's free for the asking.

D. Derbyshire & Company

Head Office and Works: BROCKVILLE, ONT.

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WE WANT AGENTS IN A FEW UNREPRESENTED DISTRICTS

SIX Demonstration Orchards near Collingwood, Ont., two years ago were the cause of A GREAT AWAKENING IN APPLE GROWING.

One local orchard of less than one acre never before in its best year yielded over \$50.00 gross return. For years it returned practically nothing. It was a failure. The owner was going to root it out.

But UNDER EXPERT TREATMENT the first season—1910—IT RETURNED OVER \$300.00 NET PROFIT!

Last year there were sixteen Demonstration Orchards. Furthermore, there were Demonstration Orchards in all of the leading apple-growing districts.

These have shown that ALMOST UNBEARABLE PROFITS are being made in Apple Orchards.

They have caused a great revival of interest in Apple Growing, which will be at high tide this year.

Take Advantage of This High Tide. Get Into Our Big Orchard Annual—Out March 7th.

Write to-day for your space. FARM AND DAIRY Peterboro, Ontario



THE IMPS OF NATURE WILL ROB YOU IF YOU DON'T WATCH OUT

One of the most prolific sources of waste in connection with most farms is the large, uncurbed, untramped, uncovered manure pile. Beginning with the thaws of late winter, much fertilizing value is lost almost before one knows it through the leaching of the liquid manure, which is the most valuable since it contains the readily available plant elements, which because of their ready availability and solubility are carried off in the leaching waters. Then, too, our cartoonist might have portrayed some of the imps as having wings and carrying the most worthless ingredients in the manure off into the atmosphere. Manure left piled loosely, especially if it contain horse manure, will shortly so heat and fire-fang that great weights of that valuable constituent nitrogen will be so chemically changed as to become lost in the atmosphere in the form of volatile ammonia.

Curiously enough, as is portrayed in the cartoon, there are general evidences of neglect and failure on farms where the manure is allowed to waste. Of all places it is on these poorer farms that the manure should receive the greatest care, since on these farms it is so badly needed in order to restore prosperity.

A Muskoka Farmer Writes

Editor, Farm and Dairy.—I think you are getting right down to the root of the matter in saying that in Canada we lack legislation for the easy incorporation of cooperative societies. I always thought Canada considered herself a forward, progressive country. We hear it put forward often enough.

We want similar legislation to what there has been in England for many years past. It was the townsman in England who was driven to cooperation through high prices and overcharges. We want cooperation in town as well as in the country. Canada is really very backward in these matters.

We want more markets and cattle auctions in the remoter districts to stimulate production. What is the use of me raising better-fed beef than my neighbor if I get no more for it?

A good auction would soon see to it that the best animal got the best price. There is more incentive in that than in ribbons at the Agricultural Show.—"A Muskoka Farmer," Fox Point, Ont.

Ontario Plowmen's Association

Upwards of 150 delegates were in attendance at the annual convention of the Ontario Plowmen's Association held in Toronto, Friday, Feb. 2nd. These delegates represented the different branches throughout the Province. The meeting was enthusiastic.

President Rennie's address contained many telling references to the important work of the association. He referred to the assistance given by the Provincial and Dominion Governments over 30 years ago to agriculturists and the large grants that were given over a quarter of a century ago to Provincial, County and Township plowing matches. Where over these matches were held you find

to-day the finest cultivated farms in Canada. The revival of these institutions, if long delayed, will add materially to the productiveness of the soil of this country. Thousands of dollars were granted in those early days and in 1911 the Ontario Government placed a small grant of \$250 in the estimates for plowing matches held in the whole Province. It was proposed that the Ontario Government be asked that the grant be increased to \$1,000 during the present session of Parliament and that the Dominion Government be requested to give substantial assistance on the basis of the cultivated acreage in each province, to the different Plowmen's associations.

The treasurer's report, submitted by Mr. T. A. Patterson, showed the association to be in a prosperous condition financially.

The constitution was amended and the basis for grants in future will be two-thirds on membership and one-third on actual cash expended for prizes; the branch associations to make returns to the central association within five days of the holding of the match accompanied by a sworn statement as to membership and cash prizes paid.

Officers and directors for 1912 are: Hon. Pres., Alex. McDowan and H. H. Pugh; Pres., Simpson Rennie; 1st Vice Pres., Wm. Walkington, King; 2nd Vice Pres., Frank Weir, Agincourt; Treas., T. A. Patterson, Ellesmere; Sec., J. Lockie Wilson, Toronto.

Directors: A. P. Pollard, Canton; Wm. Walkington, King; A. Warnia, Craignave; Jas. Hood, Agincourt; W. A. Dickieson, Ellesmere; Walter Patterson, Stroud; Jas. McLean, Richmond Hill; Jas. Snows, Britain; Frank Weir, Agincourt; T. J. Chisholm, Hornby; Arch. Patterson, Ellesmere; N. W. Malloy, Toston; Simpson Rennie, and J. Lockie Wilson, Toronto.

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ANOTHER

European Farm

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Oats
Potatoes ...
Hay

"Henry G. Bell Soil Improvement our farmers will f of their land.

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FOR WEEK ENDING FEBRUARY 8, 1912

No. 6

ANOTHER VIEW OF THE QUESTION "DO COMMERCIAL FERTILIZERS PAY?"

R. Innes, B.S.A., Kings Co., N.S.

European Farmers through Commercial Fertilizers produce much larger Crops than we do. We import 26 times as much Fertilizer now as in 1894. Why? Some points to be considered in purchasing Fertilizer.

"DO Commercial Fertilizers Pay?" After reading the remarks of Mr. G. E. Cottingham in Farm and Dairy of Jan. 25th under this heading, I was reminded of an article that appeared in the Chicago Live Stock World" the past month entitled, "What Aro We Doing?" which reads as follows:

WHAT ARE WE DOING?

"Many people have grown rich out of robbing the soil. If the methods of the past prevail many farms that have made money because everything was taken out and nothing put back will point the way of their future owners to the poor farm.

"In Europe where they have been farming all the available land for hundreds of years they are beating us to a frazzle. If they farmed in Europe as carelessly and recklessly as we do they would quickly become bankrupt or starve to death.

"The following comparison of European crop yields with American crop yields tells the story in the most startling manner:

Average per acre	America	Europe
Wheat	13.5	35.1
Barley	25.1	35.2
Oats	29.6	35.9
Potatoes	84.4	212.8
Hay	1.44	1.96

"Henry G. Bell, secretary of the Middle West Soil Improvement Association, points out that our farmers will be compelled to take better care of their land.

YIELDS NOT DUE TO SUPERIOR SOIL.

"The reason for the superior yields of European crops over the American cannot be credited to the original superior fertility of European soils, for they have been cultivated for centuries, and within the last century have not only maintained their yield, but their fruitfulness has increased.

"The opinions of prominent European agriculturists relative to the cause of this great increase in yield per acre will be of interest. Von Seelhorst, Royal Agricultural Experiment Station, Göttingen, Germany, says: "I believe that the principal increase of the harvest is to be attributed in part to the application of artificial fertilizers themselves, and in part to their continuation with green manures. Through the application of the two, the average yield has doubled on our common light soils. In some cases the yield has even increased two and one-half to three-fold. In general I assume that of the 100 per cent increase in the yield 50 percent. can be attributed to artificial fertilizers.

AS SEEN IN FRANCE

"The Minister of Agriculture, Paris, France, writes: 'As near as I can determine, the relative importance of the different factors are as follows: In extensive agriculture—

Increased use of farm manure and commercial fertilizers, at least 50 per cent.
Better preparation of land,30 per cent.
Selection of seed15 to 20 per cent.

In intensive agriculture—
Effect of fertilizer70 per cent.
Effect of preparation of land15 to 20 per cent.
Effect of selection of seed,10 per cent."

WHY DO WE DO IT?

When we consider that farmers in the United States in 1910 used nearly \$90,000,000 worth of commercial fertilizers and that in 1894 Canadian farmers imported \$25,000 worth of fertilizers, and



These are the Boys to Do the Work

When it comes to hauling a manure spreader, a two-furrow plow, a disc harrow, or, in fact, almost any of the large machinery used on our farms nowadays the small horse isn't in it with horses of the type here named on the farm as in the city. The horses here seen are owned by C. H. Watson, York Co., Ont.

that in 1909 our importations had grown to \$530,000, there can be no doubt left in the minds of our farmers as to whether it pays or not to use these fertilizers.

If we farmers of Canada would only realize that we must take into consideration the guaranteed analysis of the fertilizers we buy, and not so much the dollars and cents we must pay per ton, there would not be such unsatisfactory results reported as we have in the case of Mr. Cottingham. While I do not infer that Mr. Cottingham has not done this, I fully believe, and it has been amply demonstrated, that if commercial fertilizers are judiciously applied, the results will be entirely satisfactory, and will prove concentrated plant foods to be very economical and profitable for general use. In order to apply them judiciously it requires a careful study of the crop requirements and the natural fertility of the soil. It must always be remembered that the element present in smallest quantities is the one that determines the success or failure of the crop.

As we all know, there are two main classes of commercial fertilizers—those of purely chemical composition and those based on materials of organic origin. There has been considerable discussion as to which is the more economical for us to use. The first class have been extensively used, as they show results immediately. There is a plentiful supply of nitrogen available if nitrate of soda is used up to the time when the plant begins to fruit heavily, but from this point the supply grows rapidly less and disappears entirely long before the fruit matures; that is, when the plant most needs support it is entirely cut off and growth is very slow and poor. In consequence we have small grain, or in the case of fruit a large part of it will fall off. Where, however, other forms, such as blood, tankage or bone fertilizers are used, the readily available nitrate will give the plant a vigorous start, and when it is done the organic fertilizers come right along and give a full supply of nitrogen up to the time of full maturity. This to my mind shows out very clearly that 'animal fertilizers' are as a rule the most reliable and economical for us farmers to use.

During the past number of years practically all of the fertilizer of this class has necessarily been imported from the United States, but now a few of our large killing houses are placing on the market high grade brands of animal fertilizers manufactured here in Canada.

TRY IT OURSELVES

The only way to ensure success in the use of commercial fertilizers of any kind is to experiment yourselves. First we must ascertain what food constituent is wanting in our soil and then apply such brands high in this constituent that are recommended by reliable firms for the crop we intend to grow. I believe that if we farmers would obtain some good literature on fertilizers and study it carefully, and also solicit information from fertilizer experts in connection with Experiment Stations and fertilizer firms we would be much better rewarded than by proceeding according to the directions of a fertilizer agent who may possibly not know the first thing about the practical application of such materials. We always ask these agents for printed information—all up-to-date firms supply them with it.

I hope that a number of our most enterprising farmers, men who have used and are using commercial fertilizer, will take up this discussion and favor us through Farm and Dairy with their experiences, as I am sure they might be of great financial value to those readers who have not as yet used these materials.

The crammering machine may be a means to the end in the hands of an expert poultry man, but it would not be a profitable investment for the ordinary farmer. With a crammer, the very highest quality of flesh is obtainable, but it takes an expert to handle the machines.—John I. Brown, Montreal, Que.

FARMERS AND LABORING MEN--THEIR INTERESTS IDENTICAL

ARTICLE No. 9

WHEN we find the causes which have led 100,000 people to leave the farms of Ontario during the past 10 years, we will have found the cause of the city slums. When we understand why the average farmer on only moderately good land, in spite of the improved farm machinery now in use, still finds it hard each year to make ends meet, and some years goes behind, we will understand also why the laboring man in the city, in spite of the periodical increases in wages he has obtained through his labor unions and strikes, still often finds it difficult to make a living. These problems all trace back to the same cause. The cause is easily explained.

A SIMPLE ILLUSTRATION

Suppose an early stage of society in which 100 men are making their living by fishing. At first each man digs his own worms, weaves his own lines, trims his own fishing rods and digs the metals he requires in order that he may make his hooks and trolis. He does everything for himself. For a while they get along nicely. Finally, they discover that because each man is doing everything for himself, they are all doing a lot of needless running around. They, therefore, arrange with five of their number to dig the worms required by the other 95. The 95 continue to fish. It is agreed that the five, as long as they work faithfully, shall receive their full share of all the fish that are caught. This arrangement proves satisfactory, as it is soon found that the 95—through being able to fish more steadily—are catching more fish, than the 100 men were catching before. All, therefore, are pleased. Presently further similar improvements are decided upon. Five more men are appointed to cut fishing rods; five others to dig the metals required for the hooks and trolis, and five others to make the hooks and trolis from the metal after it has been dug, as well as to weave the lines. This leaves only 75 men fishing. Still everyone is satisfied. It is realized that because each man is able to work steadily at the one line of work, he is able to do better work than he could if he had to do a little of everything, and that, therefore, the 75 are still catching more fish than the 100 would on the old basis. Finally, however, it is discovered that some men are shirking. It is arranged, therefore, that each man shall use what he produces to buy from the others what he needs. This it is soon found that a fishing rod worth a certain number of fish and that a hook and line are worth so many more. Still everyone is satisfied because they know that they are obtaining just what they earn, no more and no less, and that they are free to go back to fishing or to dig worms or to cut fishing rods if they so desire. As all are working there is a community of interest and a freedom from class antagonism.

THEIR INTERESTS ARE IDENTICAL

That is or should be the position of society. The farmer should see that the workingman in the city who is making him a plow or harrow, a suit of clothes, a pair of boots or anything else that he uses in his home or on the farm, is helping him to produce just that much more off his farm by giving him more time to cultivate his land and care for his stock. Were it not for the city working man we farmers would have to undertake so many other lines of work we would have little time left for farming and we would soon go back in condition to the primitive ages. Thus our interests and those of the city working man are identical. Anything that injures them injures us and everything that injures us injures them.

But, unfortunately, that is not the condition of society to-day. If it were, everyone would be obtaining the full reward for their labor and there would be no problem of the city slum or of rural depopulation. Instead, there is another influence at work whose importance we have not fully recognized. It is this:

HOW THE PUBLIC IS SQUEEZED

Suppose when the first five men stopped fishing in order that they might dig worms they had found that one man had got ahead of them and gained the ownership of all the land around available for the digging of worms. Suppose, also, that this man sat back and told them that they could not dig a spadeful of worms without giving him a certain number of fish. From that time on that one man would have the other 99 practically at his mercy. He could exact from them almost what toll he liked. He need never work any more and could grow wealthy while the 99 remained in want.

But that is not all: Suppose that when the second five went to cut the fishing rods they found that another man had gained control of the woodlands and was determined to charge them his own price for every rod they cut; that when the third five went to dig the metals they discovered that still another man had secured a monopoly of all the mines and that he would not let them dig a pound of metal without first paying him his price. We would then have three men who would have the other 97 at their mercy. They need not work although the 97 might starve. They could acquire riches while the 97 found it hard to earn a living.

HOW THE PUBLIC IS ENSLAVED

That is practically the position of society to-day. We have allowed almost all of our great natural resources, including our timber limits, our mines, and our water powers, to pass under the control of private individuals and companies. We have, also, allowed our great transportation companies, and the land in our trading centres, the cities, to become monopolized in the same manner. In addition, by means of our tariff laws we have given certain people the power to form combines and mergers and thus to control the prices of most of the goods we buy. Our ignorance has been the cause of our enslavement.

THE FARM LABOR DIFFICULTY EXPLAINED

This is the explanation of the fact that no matter how much we may produce from our farms or how much the laboring man may succeed in having his wages increased, we are neither of us able to keep most of it after we get it. The people who have control of those things we must buy practically dictate to us the prices we must pay them for them. Thus we no sooner begin to prosper than up goes the prices of things we buy, and a period of hard times soon sets in. This explains also why these other interests are able to pay better wages than the farmer can. They have the power to take the increased wages they pay both out of the farmer and later out of the working man after he gets them. Thus they squeeze both the laboring man and the farmer.

This is why the interests of the laboring man and of the farmer are identical. It explains why they should unite in an effort to bring about an improvement. It explains also how it is that we have millionaires and multi-millionaires on one hand and increasing poverty on the other? Is it not time for us farmers to shake off party politics and to stand together. Our farmers' organizations are doing a great work for us in an effort to right these conditions. At present in Ontario, at least, we are not supporting them as we should.

Feed Cows Well When Dry

Geo. Coleman, Glogargry Co., Ont.

I often wonder what many of our farmers are thinking about when they allow their dairy cattle to get so badly out of condition in the winter. The excuse usually offered is that they are in summer dairying only and can't afford to feed their cows when they are not giving milk. "Can't afford not to" would be my view of the matter. I plan to have my cows fresh in the spring, as it is only in the spring and summer that I have a market for milk, but the feeding I do is not discontinued in the winter.

How can one expect cows to do well when they go on grass if they have to spend all the first month getting a little flesh on their ribs and storing up a little vigor with which to make milk. And by the time the cows are getting in fair, good condition, the pastures start to turn up and the result is the 3,000-pound cow of which we hear so much. It isn't the cow's fault. Under different management she would have produced twice as much milk. I try to have our cows in good condition when they freshen. They then start immediately to pile up a good flow of milk, and come nearer 6,000 than 3,000 lbs. in the factory season.

THE REQUIREMENTS OF THE CALF

There is another very important reason why we should feed the cow well in winter. It is then that she is developing her calf. This is a great strain on the cow, and she requires lots of nutritious food. Good food is necessary if we are to have strong, healthy calves.

I find that well matured corn ensilage and well aired clover hay, 30 to 40 lbs. of the former and 15 lbs. of the hay, makes a good winter ration for the dairy cow of average size. I feed the ensilage in the morning and follow with the hay when the mangers have been cleaned up. The cows are then left alone till five o'clock in the afternoon, when they are again fed ensilage and their mangers are filled with oat straw. What is not eaten in the morning is thrown back under the cattle for bedding. This feeding is cheap and it serves the purpose well.

WHEN GRAIN IS FED

As the time for freshening approaches a little ground grain is added to the ration. This helps in the development of a vigorous calf and gives the cow more strength to do her duty as a mother and at the pail.

We hear much of feeding dairy cows when in milk, and the profit is right in our hands. We need to hear more of preparing the cow for the lactation period, when the profits of feeding are none the less real, but not always so easy to see. My experience has convinced me that the great mistake the most of our dairymen are making is in turning their cows to the straw stack during the winter.

Winter Emmer and Winter Barley.—A comparative test of Winter Emmer and Winter Barley was made throughout Ontario during the past year. The Winter Emmer gave a yield of 3,400 pounds and the Winter Barley of 3,940 pounds per acre. Neither of these grains have as yet become extensively grown as a farm crop in Ontario.—Prof. C. A. Zavits, O.A.C., Guelph.

All droppings are removed every morning from the henhouse and the floor is swept. Perfect cleanliness and pure air mean good health, no vermin, and lots of eggs. In one corner of the main part of the house, I have a low box four feet square filled with wood ashes. I add a large spoonful of sulphur each time I bring in a fresh pan of ashes. I spray the nests with coal oil each time the straw is changed.—Mrs. John Newton, Labello Co., Que.

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A Dairyman's Own Methods

H. C. Hamill, York Co., Ont.

We can always enjoy our freshest butter than any other place when cold weather comes, and particularly when there is a cold rain outside. We believe cows are very much as we are in some respects. From the time the nights turn cool in the fall till the cold weather arrives we cows are stabled at night. From that on, usually about October 1st, our cows are stalled day and night until turned to pasture in the spring. We let our cows out every fine day, care being taken not to leave them out long enough to be chilled at any time. They are not let out in stormy weather. It must not be forgotten that a cow coming out of a warm stable will chill quicker than if she had never been stabled.

Our ideal of a dairy stable is one that is well lighted, well ventilated, dry and airy without draughts, clean, comfortable and warm without any tendency to stuffiness. We have not yet reached that ideal ourselves, but we are working that way. Our stable is not as well lighted as we could wish, and we would prefer at least a nine-foot ceiling, to leave plenty of air space.

CLEANLINESS OF IMPORTANCE

We endeavor to keep our cows reasonably clean. We always have an abundance of straw, and we bed liberally. We trim the long hair off the udder with our clippers. At the risk of being laughed at I am going to give our plan of taking the dirt off the cows' hips when necessary. We take an ordinary axe, not too sharp, and with a downward rubbing motion, it is surprising to see how quickly it trims the dirt off. Another tool we find very useful when the hair is coming out and one the use of which the cows enjoy is an ordinary hoe. Of course, this does not supersede the brush, but supplement it.

When our cows are out of the stable they have free access to spring water. We have water basins in the stable. One of the remarkable things about a milk cow is that she will drink at the outside spring until apparently fully satisfied and when tied will sometimes take a drink out of the basin before commencing to eat.

WHAT WE FEED AND WHEN

We aim to feed milk at regular hours. In the morning we feed corn ensilage, the grain ration on top of the corn; then clover hay and mangels. Just before dinner the mangels are filled with straw. What the cows leave is used for bedding. In the evening ensilage, meal, clover hay and mangels are again fed. A little salt is put in the ensilage in the manger.

We feed 20 to 25 lbs. ensilage, four to 10 lbs. meal, 15 to 20 lbs. roots and what clover the cows will eat clean to each cow each day. In feeding there are so many conditions to take into consideration that no hard and fast rule can be followed.

GRAINS GROWN AT HOME

Our grain ration at present is composed of mixed grain, oats and barley, 50 lbs.; wheat, 30 lbs.; buckwheat, 20 lbs. All these grains are ground together. Wheat bran is added at the rate of one pound of bran to two of chop. If we had not buckwheat we would add oak meal. Some oil cake is added with this mixture, but we aim to feed our cows with the products of the farm as closely as possible. If required, by-products from the local cereal mills are sometimes purchased.

While big records are desired, we believe that dairymen should aim rather to lessen the cost of production, and in the matter of feeding the live dairymen will not overlook this point. The individuality and capacity of the cow must be studied, for a cow must be fed liberally to produce cheap milk. But there is a limit beyond which the cow will not pay for the extra feed, and it will then only do injury.

A cow should be fed sufficient when dry to be in good flesh at freshening. If necessary, full grain rations may be profitably fed until about the time the calf is expected.

Stabling For Young Cattle

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

There is one other feature of stabling to which I would like to draw attention, and that is the question of providing special quarters for calves and young cattle. The keeping of calves in a stable that is crowded with other animals is not to be recommended. If there is any disease in the herd, these calves are given every chance to acquire it. Suppose, for example, that there is



What Better Job Could One Want

There is something about splitting nice straight maple like this that appeals to all boys and most men. Our editors often look back with longing to the good old days when they split the maple wood and enjoyed the best of health, appetite and sleep. Photo taken on farm of Thos. Salow, Baron Co., Ont.

more or less tuberculosis in the herd, and that our young calves are kept in the same stable with these tubercular animals and are fed upon tubercular milk, what chance have they to escape the disease? If, on the other hand, they could be kept in a separate shed where they had plenty of fresh air and exercise, they would have a very much better chance of coming through without infection.

IN CASE OF TUBERCULOSIS

If a man had any reason to suspect that there was considerable tuberculosis in his herd, I believe it would pay him to keep his calves in a separate building and to feed them upon sterilized milk, never taking them into the other barn until they were practically full grown. I believe that by following this method a person could in the course of time practically rid his herd of tuberculosis.

Many people are afraid that calves will suffer if kept in a cold place. Experience, however, goes to show that such is not the case. We are keeping at the present time very young dairy calves in a shed that is simply single boarded, with battens over the cracks and a straw loft above, and these calves thrive as well as any calves that we have and never seem to suffer any inconvenience. Every winter also we keep some of our young cattle in part of the sheep pen, where it is practically as cold as out doors except that the animals are sheltered from the wind. These young cattle thrive better than those which are kept in the warmer stable.

Criticism on Manure Valuation

J. Eldridge, Bruce Co., Ont.

In answer to question No. 1 submitted by Mr. F. V. Thomson, York Co., Ont., in Farm and Dairy, January 25th (page 11), I herewith give a few extracts from "Bulletin No. 5," by Frank T. Shutt, M.A., Chemist, Dominion Experimental Farms, Ottawa, on Barnyard Manure. This is a book which farmers should read and possess.

"The following table is calculated from liberally fed animals, with sufficient bedding and absorbents to preserve the liquid manure:

Sheep	(value of manure per ton)	\$3.30
Calves	(value of manure per ton)	2.18
Pigs	(value of manure per ton)	3.29
Cows	(value of manure per ton)	2.02
Horses	(value of manure per ton)	2.21

"The bulletin further adds that without perfectly tight concrete floors, litter or absorbents; careful experiments have shown that the loss in the stable often exceeds that in the manure pile. The use of Gypsum in conjunction with the bedding, even on a cement floor, will fix and retain the volatile ammonia, thus preventing a loss of nitrogen in the stable or the barnyard.

"There is considerable loss by manure piles being exposed to rains and the drainings allowed to run off and escape. Such 'washed' manure is worth but a fraction of its original value. This depreciation before the manure is carted to the fields may, and frequently does, exceed 50 per cent of its value as it came from the stable and barn.

"Protected manure, under sheds, has 10 per cent less organic matter destroyed than exposed manure, that nearly twice as much nitrogen escapes from 'exposed' than from the 'protected' manure and the losses of phosphoric acid and potash, especially the latter, are very considerable from the exposed manure. This experiment with exposed manure was conducted under much better conditions as regards protection from loss by drainage than exist generally upon farms. To emphasize this fact about the exposed manure, it was kept outside in a box or bin that was practically water-tight."

The writer's experience with a manure shed is—Don't leave the manure in piles, as dumped, with the warmth of the stable in it, but mix and spread six or eight inches deep, then it will cool off and rot with a minimum of loss. If it steams in a few spots, throw a little water on it.

To readers of Farm and Dairy I would say, send for a copy of Bulletin No. 31, Central Experimental Farm, Ottawa.

Grit for the Chicks

Wm. B. Lynch, Colchester Co., N.S.

Old poultry men would smile at the idea of any one not knowing that hens are minus teeth. Still there are a vast number of people who do not realize that chickens and hens chew their food after it is swallowed; in other words, the food enters the gizzard and is there crushed or chewed. The fowls are not able to perform this function properly without the aid of grit.

The old hen will manage to get along and try to find grit if neglected. But young chicks are not capable of doing this. The result is if they do not have grit mixed with their food and constantly before them they will sicken and die.

To raise healthy chicks mix one-third grit by weight in their food the first three days; from then until fourteenth day one-sixth by weight. Gradually decrease the amount in food, and be sure to keep constantly before them. Grit should not be too coarse. Following this method I have raised more chicks from one hatch than the average poultry man does.

PERFECT Maple Evaporator

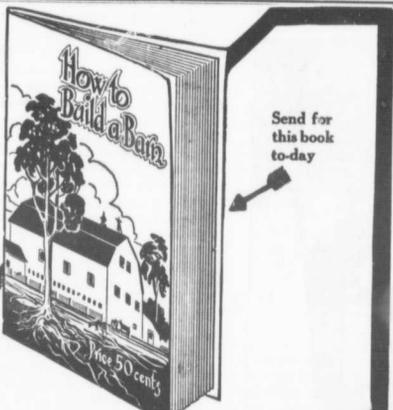
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How Would You Build a Barn?

WHETHER would you put it? How big should it be? How ought it to be arranged inside? What provision would there be for storing crops? How would you provide for convenient feeding; for removal of manure, for easy access to stalls, store-rooms, hay-loft and feed-bins? What materials would you use—for foundations, for framing, for siding and for roofing?

In short, how would you plan the building so as to get the greatest possible barn value out of the money and labor invested?

These are a few of the questions you must answer before starting the foundation trench.

They're all answered in our handsome free book,

"How to Build a Barn"

This book contains complete plans and specifications for all varieties of barns. It is written for Canadian farmers, and every barn described is designed for Canadian weather conditions. The descriptions aren't just general "ideas"—they are carefully-prepared architect's specifications, expressed so plainly that anyone can understand them. Dimensions, requirements for materials, method of erection and all other details are carefully explained. Drawings show floor plans, front and side elevations and framing details.

The book also describes Galt Steel Shingles—the shingles that are lightest, most easily placed, that do not require painting, are fire-proof, lightning-proof, rain-proof and wind-proof.

The book was published to sell at 50 cents. But we've decided for a time to send a copy free to any farmer who writes for it.

Send your name and address to-day. The book will be sent you by return mail.

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Send me book on barns.

FD

FARM MANAGEMENT

Principles of Ice Storage

In order to keep so perishable a commodity as ice it is necessary in the construction of a storage structure to consider carefully those physical and mechanical principles which underlie its preservation. (1) To keep well, ice must have a minimum of surface exposed to the air or to the packing material. This is most easily accomplished by piling the ice in the form of a cube. A mass of ice 12 by 12 by 12 feet exposes less surface than the same tonnage piled in any form the less nearly that of a globe. (2) The keeping of good ice depends upon the completeness of its insulation, whereby it is protected from external influences, such as heat and air. (3) Drainage is important because the lack of it interferes with the insulation. (4) The ice itself must be packed so as to prevent as completely as possible the circulation of air through the mass. The more nearly the mass of ice approaches that of a solid cube, both in shape and texture, the easier, with good drainage and insulation, will be the keeping problem. The keeping of ice, then, depends upon the shape of the mass, its insulation, its drainage, and its solidity.

About Pigs

If the pig is stunted in its food at any stage of its life, it can never become a perfect pork producer.

A hog can be starved to eat almost anything, but seldom does well on spoiled food.

When feeding mangels the best method is to feed them whole or pulped. In feeding little pigs a little bit of root thrown in whole seems to attract their attention, and as there is always more of the root on them the little fellows enjoy nibbling at the root and getting a little soil along with it, and it seems to keep them in good shape. It is a most excellent corrective for all digestive troubles.

Cow Improvement Needed in B.C.

P. H. Moore, Dairy Instructor, Victoria, B.C.

How are we to improve our dairy cattle in British Columbia? We cannot buy better in the province, without expending large amounts of money. One way would be to rid our herds of all the poorest, then with a sire from stock in the U.S. that is good, we could get a crop of better ones in not too many years that would prove better than their dams. With the same treatment the second generation will be better still. We need not expect to attain perfection or the ideal we are working toward in one year or several, but if we are only gradually raising it, it will be more economical than gradually losing, or standing still.

According to the Dominion Government report for 1910 on cost testing work done in B.C. during 1909, 327 cows were tested, averaging 5,127 pounds of milk and 222.5 pounds of fat. If the milk was sold at the average price of 20 cts. a gallon, these cows would give an average return of \$102.54. Valuing five pounds skimmilk as equal to one pound of mixed grain would make the skimmilk worth about \$17.42. Fed to hogs, but if fed to dairy heifers it is worth much more. Add this to the value of the fat at 35 cts a pound and we have a return of \$95.30.

This of course is the returns of only a few of our cows. With the best cow tested giving 361 lbs. of fat, and the poorest giving only 74 lbs., we can see the great need of weeding

and selection. The last cow mentioned could not be fed in any way to make a profit, and one of our chief concerns should be to find out those robbers and cull them out. If you can't afford to sell them cheap, much less can you afford to feed them. Increase the food of the poor cow and you lose it. Increase on the good cow up to the limit of consumption, and she will treble her profit.

We can hardly afford to feed cows giving less than 5,000 lbs. of milk in B.C., and are we without this in the U.S.? I am afraid we are not.

A Point in Tile Drainage

We have a springy, sandy field, that is drained by the field is on a steep slope of 10 to 15 feet in 100, from which it suddenly changes to two inches in 100 feet. The laterals running up this slope are of three-inch tile, and they become clogged with sand on the easier grade. How can I prevent this?—A. A. Elgin Co., Ont.

It is possible if the land is very springy that while a three-inch tile may be sufficient to carry off the surplus water a larger size would be required on the easier slope. Even then, however, there would be danger of the sand piling up at the change in grade, and thereby rendering the whole system of drains ineffective.

This can be overcome by inserting a sand trap such as is shown in the illustration herewith at the juncture between the steep and easy grades. The trap can be made of either brick or cement, and should extend one foot deeper than the tiles.

The tile leading away from the trap should be an inch lower than the rest. In this trap the sand will sink to the bottom and the water will flow on free from sand particles. It will then be necessary to clean out the sand at intervals. The top of the trap may be covered with a large flat stone, and may be buried several inches so that the field can be worked over or it may extend right to the surface, which plan would be preferable if it would need cleaning frequently.

Chemical Analysis of Soils

Extract from "Artificial Fertilizers, Their Nature and Use," by B. Leslie Emile, F. C. S., F. A. S. I., F. D. S.

At one time it was thought that a chemical analysis of the soil ought to indicate exactly the manurial requirements of that particular, but it should not be so soon upon when it was observed that certain rich clay soils, which on analysis showed a very high total potash content, were still benefited by an artificial application of potash, as proved by the increase in crop production.

Some soils, also, which analyses high in phosphoric acid, were found to respond readily to an artificial application of an available phosphatic fertilizer.

Now, while a general chemical analysis will show the total amounts of plant food in the soil, it does not show what proportions are available to the plant, so that the quickest way to find out the manurial requirements of a soil is to conduct fertilizer tests on the farm.

Farmers, who have not already done so, should procure a copy of this important Bulletin.

Copies of this and other bulletins treating of the fertilization of various crops, may be had by writing direct to
GERMAN POTASH SYNDICATE,
1106 Temple Building, Toronto, Ont.

The Feeder

The Feeder's use of our treated articles. All questions in Nova Scotia.

A Ration

We are planning a ration for this section. We advise you to erect a well on home ground in the roots grown in Nova Scotia.

Mangels, turning out a large quantity of succulent dairy crop, as does not leave a sour section in the mangel. The small area is planted to be fed and dry cows. Sufficient to make a mangel. However.

Care of Cows

There is a crop of many to the farm during often happens the short shortage of food is that cows are stunted in growth stunted or two.

Most of the cows start the year, their lives, from are allowed to such that time. Early with good pasture, but have been shared a part of. Such treatment is shape for the winter must be kept developed and expected.

BONE AND MUSCLE

The cow's system considerable amount of building material.

The feeding of corn is not desirable, but had better be fed by feeding such as oats, a little and, if obtainable.

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The Feeders' Corner

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

A Ration Without Ensilage

We are planning to start dairy farming this season. Corn does not mature in this section, but cows would you advise us to grow for succulent feeds? Will grain mixture would give best results in Nova Scotia? Will cows milk well on roots and clover hay with a little home grown grain?—A. B., Antigonish Co., N.S.

Mangels, turnips or sugar beets will take the place of corn in supplying succulence in the ration for the dairy cow. As you are going in for mangels, mangels should be the main crop, as the feeding of this root does not leave a taint in the milk. In our section it is generally easier to raise turnips than mangels, and a small area of these roots should be planted to be fed to the young stock and dry cows. Sugar beets make very good feed, but usually the yield is not sufficient to make them as profitable as mangels. You might try them, however.

Care of Colts on the Farm

There is a great tendency on the part of many to neglect the colts on the farm during the winter. It too often happens that there is an apparent shortage of feed, and the result is that colts are slighted. One way of raising a young colt is to have his growth stunted during the first year or two.

Most of the colts on the farm get a good start; the first six months of their lives, from the fact that they are allowed to suckle the dam during that time. Early fall provides them with good pasture and possibly they have been receiving some oats or shared a part of the feed of the mare. Such treatment puts them in good shape for the winter, but liberal feeding must be kept up if a strong, well-developed and matured horse is expected.

BONE AND MUSCLE MAKING FEED

The colt's system requires a considerable amount of bone and muscle-building material, and this can only be had by feeding nitrogenous feeds, and, if obtainable, some clover hay. The feeding of corn, so often practiced, but had better be confined to the matured horses. Access to the straw pile will not hurt a growing colt, but the straw will be compelled to rely on the straw for a livelihood.

The question is often asked: Why do we find so many promising colts at such poor yearlings? The foregoing statement is in part explanatory of such a condition of affairs.

SAVE \$100

One of the best forms of investment on the farm is the liberal feeding of farm animals of all kinds; and the colt is no exception. A well-bred colt, if properly taken care of and fed the right kind of feed during his first three years of life, will bring from \$75 to \$100 more for a three years old poorly fed. Good young horses are always in demand on the market, and can only be supplied from the farms where colts receive the proper care and treatment.

Passing Thoughts

By the Editor

A post card to the Central Experimental Farm, Ottawa, will put you on their mailing list and bring you all kinds of valuable information.

Good feeding consists in feeding dairy animals a certain amount with a right balance of protein and carbohydrates and fat. The most successful feeder is the one who gets the right balance with the least expenditure. How about alfalfa and corn ensilage?

The wise man learns by the experience of others. Personal experience is too slow a teacher in this progressive age. There where the farm paper shines. It puts you the best experience of the best farmers. There may be registered cows in the dairy herds that don't pay their board. But the percentage is low as compared with the poor cows in grade herds.

Instead of moving to the city, why not transport city conveniences to the country. Moving expenses would install a fully equipped bathroom, water on tap in the kitchen, etc. Discontent of the right variety is a fine thing. Content is stagnation. Are you satisfied with our mongrel cows, our poor crops? We hope not.

Highway improvement is a subject of vital interest to farmers: Particularly the highway from the farm to the nearest town or shipping point. Trunk lines from city to city are fine for automobiles. But then we pay the bills and will insist first on the roads that we need.

How do you like the articles on taxation now appearing in Farm and Dairy? Write and give us your opinions on the subject of taxation.

About Dehorning Dairy Cattle

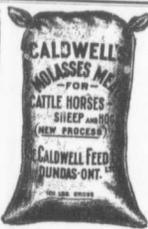
O. E. Reed, Kansas Agr. Col.

The reason often given for not dehorning dairy cows is that it will cause them to fall off in their milk for after they are properly cared for when the cows are dehorned, they will soon recover from the shock of dehorning, and the decrease in milk flow thought.

Twelve cows in the herd at the Kansas State Agricultural College of the milk production of each cow was kept before and after dehorning. The total production for the 12 cows amounted to 1,142.5 lbs. of milk. The period of five days after dehorning was 1,100.7 lbs. of milk. The total in the above period was 40.8 lbs. The average daily loss for each cow for five days was only .69 lb., or made more milk during the five days after dehorning than she did for the five days before dehorning; the other 10 produced less milk after dehorning. On the fifth day after dehorning, all except two cows were producing equally as much and some produced more than they did the day before they were dehorned.

Two methods described
The best time to dehorn an animal is when it is only a few days old; by using caustic potash. After the horns best be cut off a fair growth they can persure. The animals should be fastened securely in a position where the operator can get at the horns. The best method for fastening the animal is to put it in a chute being the purpose. In sawing or bulled for this horn, care should be taken to cut deep enough or the horn will grow deep enough to include a ring of skin and hair. The base of the horn that is amputated should show a ring of hair.

As soon as the horn is cut off, some disinfectant should be used on the fresh cut. Pine tar or some of the coal tar dips are good for this purpose. Dehorning should be done in late fall or early spring; at this time the weather is moderate and the flies do not bother the animals.



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palatable, nutritious and economical. Feed it and your cows will yield more milk than they are now doing and put on flesh. Contains no spices or drugs. Write for booklet and direct from the mill prices.

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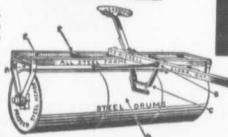
The "Bissell" Roller is all steel except the Pole. It is braced and stayed to stand all kinds of hard work and wear well. The bottom of the frame is all steel too.

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The Cages holding the anti-friction rollers are the best yet; they're MADE OF MALLEABLE ALL IN ONE PIECE—no twisting or binding of the bearings on the axle of the "Bissell" Roller. The Seat Spring is reinforced and is DOUBLED AT THE HEEL.

These good features are not all of the advantages of the "Bissell" Roller. Many more good points are built into them, making a Land Roller that is "built for business" that stands up, against lots of hard work.

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T. E. Bissell Co., Limited, Elora, Ont.



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If you are using a plank and a wheel barrow as the means of carrying the stable manure to the pile, the picture above shows you how you might do it.

Isn't it easy? A **BT** boy can do it with a BT Litter Carrier and never turn a hair. He'll make a quicker, cleaner job of it too. Four big barrow loads every time.

It's Done Better

It's done better with a BT Litter Carrier because there is a big wide mouthed bucket lowered right down to the floor into which you throw the manure. It is water tight. With a wheel-barrow some of the refuse falls off while you are loading and some more falls off on the trip to the pile. **You can't help it.**

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The boy doing the work of a man **saves money.** Improved cleanliness of the yard and better conditions all around. You get the manure well away from the barn, so that it is not rotting out the sides and sills of the barn and injuring the health of the animals with the ammonia fumes constantly pouring off the manure pile.

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FERGUS, ONTARIO

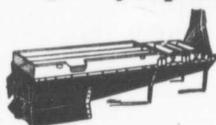
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I would like to send you my book on the subject. It contains full information, formulas and lots of information to farmers who want to get the most and the best for their money. The book will be sent free upon request by post card from you.

Dr. WM. S. MYERS, Director of Propaganda
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HORTICULTURE

Something That Pays Well

J. W. Clarke, Brant Co., Ont.

I do not know of anything that will pay better than a good orchard. I bought a place some years ago on which was a good sized orchard. It had been neglected and 100 barrels annually was considered a good crop. I decided that I could make that orchard pay a great deal better than it had ever done before. To take an old, neglected orchard and bring it up to a profitable production and this is a lot of work and is not all done in one year. I have spent five or six years on mine and it is not ideal yet.

A FIRST ESSENTIAL

Pruning is one of the first essentials to renovating an old orchard. I prune any time that the saw is sharp. I do not recommend cutting off large limbs, particularly in the fall. Neither is getting up in the tree and cutting off all you can reach, pruning.

Start at the outside first. I have a ladder on wheels and from this work around the outside of the tree. Pruning from the inside gives a straggling, weak tree, and there is a large space in the centre which is not productive. By using the ladder and a pair of pruning shears and saw the work is easier than thinning with the shears with a long handle standing on the ground.

THE OBJECT OF PRUNING

We aim to prune and thin the tree so as to distribute the fruit equally in all parts. By letting the sun in, we have just as many apples and they are of a better color. Sun-scalp on the larger limbs is avoided by getting the tree so thin that the sun can shine on all parts in all seasons.

There is a danger if the pruning is too drastic the first year that sun-scalp and a large growth of suckers will result. In going over my orchard, I take two or three years to thin out the top.

DON'T LEAVE ORCHARD IN SOD

It is not wise to leave the orchard in sod. Thorough cultivation should be practised, as this is the only method which we have of conserving the water for the use of the fruit. The importance of water for the growth of a good apple crop is evident when we know that 90 per cent. of the apple is water. We should commence cultivating early in the spring and cultivate regularly until the first of July.

COVER CROPS AND THE PURPOSE

About the first of July I sow cover crops. Where cultivation kept up throughout the entire season, the soil or of the fruit would be inferior, fruit buds would not form so abundantly for next year's crop, and the wood would not be ripened sufficiently to withstand the frosts of winter. A cover crop sown about this time by robbing the fruit of moisture and plant food matures the fruit and wood and induces a good formation of fruit buds.

HAIRY VETCH A GOOD COVER CROP

I have found that hairy vetch is one of the best leguminous cover crops to grow. It has a large growth and is a good blanket and applies falling in on this blanket do not freeze. In fact, apples of the small hard varieties can be shaken from the trees and then picked off the ground without much injury resulting.

If the land is manured slightly and leguminous cover sown, there is a danger of the tree getting too large a supply of nitrogen and as a result we get too much wood growth, which

does not ripen it properly. In a case like this, rye or buckwheat can be used to advantage as a cover crop. Buckwheat is particularly desirable, especially where poultry run in the orchard, but it does not make much of a blanket.

Apple Possibilities of N. B.

J. R. Dykesman, Queen's Co., N.B. When attending our apple show held in St. John, October 30 to November 1, 1911, I was more than impressed with the great possibilities for apple growing in New Brunswick. For flavor and color I believe our fruit will equal, if not surpass, that of any other province of Canada.

I am a beginner in apple culture. I have about 200 trees, and expect to increase this number to 1,000. We find that such varieties as Wealthy, Fameuse, Dudley, Bishop Pippin and Melintosh Red are our best varieties.

Just the Paper to Have

I have taken Farm and Dairy for several years and note the great improvement you have made in it. It is just the paper every farmer should have. The weekly market report alone is worth what you ask for the paper.—G. W. Connell, Woodstock, N.B.

I have a nice lot of St. Lawrence fruit that finds a ready sale in our local market as a fall variety.

ABOUT ORCHARD METHODS

In setting out young trees I try to have my land in good shape as I would for a crop of potatoes. I plant my trees 30 feet apart each way. If my land is dry I put water in the holes when about half full of earth. I cut back the tree about half of the previous year's growth when setting, apply manure twice a year. I find that spraying is very important for producing perfect fruit.

I enjoy horticultural work, and take a great interest in it. I would not advise you to engage in this work that does not like it, as we will not then make a success of fruit growing. We feel very proud of the noble way our provincial government is assisting us in this industry.

Wild vs. Cultivated Fruit

E. F. Eaton, Colchester Co., N.S. Getting out the two-horse team and starting out with the whole family berry picking may be all right for the business man, but for me it is purely business standpoint we prefer to grow our own fruit at home and take our picnics in some more enjoyable way, trailing over a rough "berry barne." As we are in the north you will keep a good sized fruit garden in shape. Raspberries, blackberries, currants, gooseberries and strawberries can all be had in abundance for an average sized family from a few square rods of land. I am sure that we can pick as many strawberries in five minutes from our garden as we could get of wild ones in an hour, and we do not have to go far for them either. And the same is true of raspberries.

I would not attempt to gain any contention or opinion amongst people in the country that wild fruit is far superior to much that may be grown in the garden. This may be true of some varieties of raspberries, but the extra size of the cultivated berries and the greater ease with which they can be picked are the results in a great saving of time, puts them in a position where they are not to be compared with those grown wild. Our raspberries picked in the middle of each year. There is very little work required to keep the patch in shape the way we handle it.

POULTRY

Pleased with

E. J. Northrup

Our poultry general plan in place of receiving 24 feet on the north, but open to the east and a half foot to the ground. Screen across are open space during extremely cold divided into pens, leaving a front of 24 feet.

We have found that it is difficult to keep the health. Many pens, but we had cold one with its legs the plumage bright from hens in the fertile and we could them. Our 1013 eggs in early in laying all winter.

How I Feed

Kenneth Pentland

We always aim at feeding. Practical mon grains can be a mixture of grain litter, one quart noon we feed a wheat and corn. The constituents of the varied from the and cabbage are poultry house for feed and sprouted about feed one bushel costing us about one quart of grain litter for each 25.

A MEDICAL POINT

FREE T

Every person interested in a complete "Zenoelium Chicken" is a reliable adviser. It is the best of all poultry, and the prevention of disease and infection.

It tells the home to rid the flock of lice, mites and cause rook, pip, typhoid, blackhead, etc. It is the best of all.

It is the best of all. It is the best of all. It is the best of all.

"Chicken Chick" is the most competent authority on poultry and is printed by the manufacturers of the product.

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PUBLISHERS' DESK

Already we have received several congratulatory remarks on the excellent and abundant practical helpfulness of our Big Poultry Annual out last week. We are pleased that our people approved of the effort, and that they found it not only of interest, but of practical dollars-and-cents value, which is what we try to make each issue of Farm and Dairy.

New subscriptions continue to come in to us in a most gratifying manner. Renewals also are being received in most satisfactory percentage. Scarcely any of our people now are taking Farm and Dairy for a year or more care to do without this paper. There are a few, of course, who do not want a dairy paper, and these we are glad to be without.

A person not in actual touch with the inside facts of what it costs to publish a paper like Farm and Dairy would scarcely believe it possible that it would be such a costly undertaking. It costs us approximately \$2.30 to get out Farm and Dairy for each subscriber for one year. That subscriber pays us only \$1.00 for his paper. Were it not for the advertising revenue we would soon be required to get someone else to undertake our financial obligations.

Whenever you see a thing, for which you have need, advertised in Farm and Dairy, it will pay you well to write the advertiser. We do not allow questionable advertisers of whatsoever kind to use the columns of Farm and Dairy and we stand back of all our advertisers and vouch for their reliability. It helps us wonderfully when you buy from our advertisers and enquire of them, saying, "I saw your advertisement in Farm and Dairy." We will appreciate your thoughtfulness for us by remembering this point when writing to advertisers.

Again we would draw your attention to the ample rewards we offer, either in cash, or useful premiums of very real and considerable value, in return for your time and effort in seeing a few of your friends and neighbors and getting them to subscribe to this clear, helpful, interesting and worth while farm paper.

We are hard at work on our next Big Special Number—our Orchard and Garden Number—to be out March 7th. "Bigger and Better Than Ever" is our motto for these Special Magazines. We can promise that our Orchard and Garden Annual will not be disappointed and all will be such that you and your friends and neighbors will thoroughly appreciate.

Our Legal Adviser

SPEED OF AUTOMOBILES.—What is the maximum legal speed of an automobile on country roads? Are they supposed to give us half the road? Are they supposed to stop if we signal them? What is the law in this connection?—E. H. B., Hutton Co., Ont.

The maximum legal rate of speed on country roads for motor vehicles is 15 miles an hour. An automobile should turn out like any other vehicle in passing a carriage. On being signalled to do so the driver of a motor vehicle must stop.

ARTESIAN WELL, SPOILED.—A neighbor sunk a gas well on his farm and tapped a stream of water. This has depleted the flow into my artesian well.

Have I any redress? The loss could be prevented at little expense.—J. W., Weland Co., Ont.

Your neighbor has a right to dig as deeply on his land as he wishes, and if in so doing he interferes with the subterranean flow of water which supplies your well, he is quite within his rights. If, as you say, the waste could be stopped at very little expense, you are strongly advised to make the necessary overtures to have this done, for legitimate use of his own land your neighbor has incurred no legal liability to you for the damages occasioned.

Our Veterinary Adviser

FOUL IN FEET.—The cleft of one of my cow's hind feet became sore and filled with pus so that she would not put the foot to ground and yet kicking it out I washed it with blue stone and water for some days and then applied Dr. Porter's Antiseptic Healing Oil, which was recommended me by the druggist. It seemed to get better, but she became tender on the other hind foot, also, though there is nothing to be seen. Two days ago, on re-examination foot first attended, which she had been standing on and which I thought was well, I found a large abscess coronet. I took this off, disinfected and applied oil as before. She has dropped from five to two and a half gallons of milk a day.—R. E. H., Kelowna, B.C.

This is called "Foul in the Feet." It is caused by standing in or walking through irritating matter as filth, liquid manure, wet ground, rushes and so forth. Stand in a perfectly dry place, remove both solid and liquid manure frequently. Thoroughly cleanse between the cloths and apply warm linsed meal poultices until soreness disappears. Then keep dry and dress three times daily until healed with one part carbolic acid to 30 parts sweet oil. If raw flesh be present apply butter of antimony with a feather once daily until it disappears.

LYMPHANGITIS.—Driving mare was standing idle in stable. One morning her right hind leg was swollen and the lymphatic glands were very sore to pressure. We diagnosed it as a case of lymphangitis. Put her in box stall. Gave poultice, followed frequently with hot water. Rubbed dry and applied camphorated ointment. The leg broke out and is discharging matter on each side below hock, but the sores are slow to heal.—W. L. H.

Your diagnosis and treatment were correct. Eruption following lymphangitis are not common, but occasionally appear. Feed lightly on laxative food. Wash the sores off well with a five per cent solution of carbolic acid twice daily and apply a dry dressing of three parts boracic acid and one part iodoform, four or five times daily. It is possible a chronic

enlargement of leg from hock to fetlock may result. If so, frequent hand-rubbing and bandaging when in the stable and the administration of one dram iodide of potassium three times daily will tend to reduce it.

Queries About Ensilage

How much ensilage is there in the 40 feet at the bottom of a silo, 10 by 28 feet, that was filled full last fall? What is this silage worth a foot when hay is selling at \$2 a ton? The corn was fairly well cared, but not very hard.—A. K., Norfolk Co., Ont.

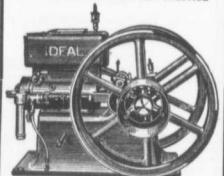
In a silo 28 ft. deep the average weight of the ensilage in the bottom 10 ft. would be about 51 lbs. per cubic foot. In a circular silo 10 ft. in diameter there are 785 cubic ft., which space would contain about 20 tons of ensilage.

When hay is \$12 a ton, ensilage will be worth approximately \$3 a ton, or \$6 a cubic foot of the silo.



GASOLINE ENGINES

1 1/2 to 50 H. P.
Stationary, Mounted and Traction



WINDMILLS

Grain Grinders, Water Boxes, Steel Saw Frames, Pumps, Tanks, Etc.
GOOLD, SHAPLEY & MUIR CO., LTD.
Branford Winnipeg Calgary

BREEDERS

And Intending Breeders OF THE FAVORITE

Holstein Cattle

will find it greatly to their advantage to attend the **FIRST ANNUAL NORTH TORONTO BREEDERS' CONSIGNMENT SALE 90% RICHLY BRED REGISTERED HOLSTEINS**, also 20 Grade Cows of Good Holstein Breeding.

On FRIDAY, FEBRUARY 9th, 1912, the Day after the Annual Meeting in Toronto of the **HOLSTEIN BREEDERS' ASSOCIATION**. These richly bred cattle have records up to 26 lbs. butter in 7 days. They will be sold at Public Auction at RIVER VALLEY FARM, North Toronto, in Mr. Jos. Kilgour's large horse training arena.

A feature of this sale is the relatively large proportion of females being offered, there being nearly 100 in all and only a few bulls.

See the large advertisement and two pairs of illustrations of these cattle in Farm and Dairy last week.

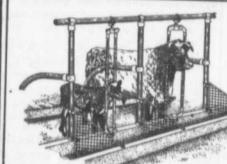
Twenty of the females offered are bred to the great \$1200 bull, "Sir Lyons Hengford Segis," whose dam, Blanche Lyons De Kol, made 33.9 lbs. butter in 7 days, and 14 lbs. in 30 days. He is sired by "King Segis," whose dam and her full sister averaged 33.25 lbs. butter in 7 days. His daughter there is no other bull on the side of the line to beat "Sir Lyons Hengford Segis." Here is a chance to secure some of his stock, which will be especially valuable.

This stock is being consigned by the following well known breeders: Gordon H. Gooderham, Bedford Park; R. F. Hicks, Newtonbrook; Jos. Bales, Lansing; O. Bales, Lansing; Geo. McKenzie, Thornhill; John McKenzie, Willowdale; C. James, Thornhill; and Jos. Kilgour, Bedford Park. For particulars regarding this stock, records, etc. see Holstein News in the photos last week.

To get to the place of sale take a Metropolitan car from the north end of Yonge street. Cars leave here every 15 minutes, and pass within a short distance of Mr. Kilgour's farm. On the day of the sale conveyances will be provided for meeting the cars and taking visitors to the arena where will be sale to be held.

Auctioneers—**B. V. KELLY, Syracuse, and R. G. HAEGER, Algonquin.**
He saw and step over from the Annual Meeting and come out to the Sale. It will pay you. Catalogues can be had further particulars can be had from

GORDON S. GOODERHAM, Bedford Park, Ont.



THE SUPERIOR, the only adjustable station that you can adjust to tie from steer, smallest calf to your largest export

STABLE YOUR CATTLE The Superior Way

We want every stockman and dairyman who is thinking of building a new barn or remodeling his present one to write for our free book on stable equipment.

IT WILL BE DOLLARS IN HIS POCKET

Now is the time to lay your plans and get all the information you can, and not be saying when your barn is completed (I WISH I HAD DONE SO AND SO.) Drop us a card to-day and YOUR book will go forward to you by return mail. Please mention this paper.

THE SUPERIOR BARN EQUIPMENT CO., FERGUS, CAN.

FARM AND DAIRY

AND RURAL HOME

Published by The Rural Publishing Company, Limited.



1. FARM AND DAIRY is published every Thursday. It is the largest actual circulation paper in the Dominion, being published in British Columbia, Manitoba, Eastern and Western Ontario, and the Bedford District, Quebec. Dairymen's Association, and of the Canadian Holstein, Ayrshire and Jersey Cattle Breeding Associations.

2. SUBSCRIPTION PRICE, \$1.00 a year, strictly in advance. Great Britain, \$1.20 a year. For all countries except Canada and Great Britain, add 50c for postage. A year's subscription free for a club of two new subscribers.

3. REMITTANCES should be made by Post Office or Money Order, or Registered Letter. Postage stamps accepted for amounts less than \$1.00. On all checks add 20 cents for exchange fee required at the banks.

4. CHANGE OF ADDRESS.—When a change of address is ordered, both the old and new address must be given.

5. ADVERTISING RATES quoted on application. Copy received up to the Friday preceding the following issue.

6. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles.

CIRCULATION STATEMENT

The paid subscriptions to **Farm and Dairy** exceed 12,000. The actual circulation of each issue, including copies of the paper sent subscribers who are but slightly in arrears, amounts to 15,000. Copies from 12,000 to 14,500 copies. No subscriptions are accepted at less than the full subscription rates.

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

OUR PROTECTIVE POLICY

We want the readers of **Farm and Dairy** to feel that they can deal with our advertisers with the assurance of our advertisers' reliability. We try to admit to our columns only the most reliable advertisements. Should any advertiser have cause to be dissatisfied with the treatment accorded from any of our advertisers, we will investigate the circumstances fully. Should we find reason to believe that any of our advertisers are unreliable, even in the slightest degree, we will discontinue immediately the advertising space through our advertisements. Should the circumstances warrant, we will expose through our columns the name of the advertiser. Thus we will not only protect our readers, but our reputable advertisers as well. In order to be entitled to the benefits of our Protective Policy, you must only include in all letters to advertisers the words, "I saw your advertisement in **Farm and Dairy**." Complaints must be made to **Farm and Dairy** within one week from the date of any unsatisfactory advertisement. No proofs, tendered, and within one month from the date that the advertisement appears, in order to take advantage of the guarantee. We do not undertake to adjust trifling differences between readers and responsible advertisers.

FARM AND DAIRY

PETERBORO, ONT.

WANTED—A REAL MINISTER

In the course of an address last week before the Belleville District Breeders' Club, Prof. H. H. Dean, of Guelph, stated that at the Guelph College last fall in the dairy department there were ninety chairs for one class and sixty students in one class, and for one hundred and fifteen students in a second class. This doubled the work of the professors as they had to hold double classes, repeating their lectures.

Similar conditions exist in other departments of the college work, but the Provincial Minister of Agriculture, Hon. Jas. S. Duff, is apparently unaware that any responsibility for this situation of affairs attaches to him. Recently he suggested, as a means of dealing with the situation, that the fees should be so increased so as to keep out students. Wasn't that a brilliant suggestion for the Provincial Minister of Agriculture to make! The students who would be kept out

under such a regulation would be those of little means. These, as has been shown repeatedly at the College, in nine times out of ten, are the best students.

At the meeting of the Corn Growers' Association last week, the president severely criticized the minister of agriculture for his lack of interest in that association. Last December, Mr. John Bright, the president of the Winter Fair, as well as of the South Ontario Conservative Association, told Hon. Mr. Duff publicly that if he did not manifest greater interest in the work of his department the farmers of Ontario would be justified in supporting the platform of Mr. N. W. Rowell, the leader of the Ontario opposition. It is becoming evident that there must either soon be a comprehensive forward move in the various branches of the department of agriculture at Toronto or we will have to get a new minister of agriculture. At present the latter seems to be most likely. The shadow of the late Hon. John Dryden grows larger every year.

MARITIME PROGRESS

Perhaps there is no better indication of the new spirit that is permeating Maritime agriculture than the large attendance of farmers and farmers' sons at the courses held at the Nova Scotia Agricultural College. Although it is only a few years since the College was established at Truro, the attendance at both the short and regular courses is already larger than the attendance at the Guelph College, when the size of the constituency on which the College draws for students is considered.

The awakened interest that is being taken in Maritime agriculture is due in no small measure to the vigorous educational policy of the Provincial Government. The fruit growers of the Annapolis Valley have always been in the front rank of Canadian orchardists. Enthusiasm for better methods is now extending to those engaged in other branches of farming. Dairying in particular is making rapid strides, and in a few years this will be the most important branch of agriculture in Maritime Canada.

A comparison with Denmark will give an idea of agricultural possibilities of just one of the Maritime provinces.—Nova Scotia. Nova Scotia is equal in area to Denmark; the soil is of better quality; the climate is ideal for dairying, much better than is that of Denmark; and being next to the ocean, the facilities are the best for shipping dairy produce to foreign markets. The new spirit that is being displayed by our maritime brethren for up-to-date farming methods will soon place them at the very front rank. A short course in agriculture with an attendance of 350 such as was held at Truro this year certainly foretells a grand future for agriculture in the provinces down by the sea.

Those of us who do not follow the markets are in a fair way to be tricked off by the first slick fellow that comes along.

BREEDERS COOPERATING

Last week the Belleville District Holstein Breeders' Club held its second annual meeting and banquet in Belleville, and this week the Ayrshire Breeders' Club of the same district did the same. These meetings are a sign of the times. They show that cooperation is making headway in Ontario. Soon we may expect to see similar breeders' organizations in various parts of the province. In fact, the nucleus of such organizations already exists among the Holstein breeders of Yonge Street, north of Toronto, in the vicinity of Tillsonburg in western Ontario, and among the Ayrshire breeders in the Howick District, Quebec.

Our breeders are beginning to find that cooperation, not rivalry, pays the better. By working together, they are enabled to advertise their districts at a minimum of expense and to attract buyers from long distances who would not visit them did they not know that they would be afforded an opportunity to make selections from a large number of animals. The same centralizing forces that are at work in the business world and merging the small into the large concerns are making their influence felt in agriculture as well.

No more important step pertaining to agriculture has been taken in Canada in many years than was adopted at the recent annual

Important meeting of the Dominion Grange when that organization placed itself on record as favouring the direct taxation of land values. This is a question that is going to grow in public importance rapidly from now on. As farmers we are beginning to realize that we are creating millions of dollars of land values each year that are flowing into the pockets of city landowners who do not create them but who take them out of us by increasing the cost of doing business in the cities, thus accounting for most of the difference between the prices that the producers get and the consumers pay. Just watch this movement grow. The Dominion Grange is playing an important part in the public life of Ontario, and deserves to be loyally supported by us farmers.

"Regularity in attending to dairy stock will produce just as much milk as several pounds of grain, and it costs less." These words, addressed to one of our editors by a successful Oxford county,

Ont., dairy farmer, are indeed words of wisdom. No amount of grain feed will take the place of perfect regularity in the care of dairy cattle. Regularity, on the other hand, will take the place of a considerable amount of grain. The milk that a cow gives does not depend on the amount of feed she eats, but on the use that she makes of it in the digestive tract. It is a fact well known to all good herdmen that the dairy cow's digestion is much better when she is fed regularly. It does not cost any more to feed and

milk a cow at the same hour night and morning than to do the same work at irregular intervals. Let us practice regularity. It pays in dollars and cents.

"You can fool all the people some of the time and some of the people all the time but you can't fool all of the people all of the time." Some advertisers imagine that they can fool all the people all the time. Some advertisers make fortunes by advertising to furnish material they do not have on hand. They manage to fool a great many people. By our Protective Policy we undertake to shut out from our advertising columns those advertisers who carry on this "fool" business. Be protected by dealing with the advertisers that advertise in **Farm and Dairy**.

When a farm is badly run down, there is no letter way to bring it up to a state of fertility than to put it into dairying, provided the dairy products are sold in some form or other of the butter fat produced.

We farmers can better afford to sell our five dozens of eggs fresh to the gatherer at two cents a dozen less, every two days, than to spend a half day away from the farm to market them irregularly—state.

The Impatience of Breeders

(The Breeders' Gazette)

It is to the man who can wait and work that stock husbandry yields its largest results. Impatience has no reward in any great undertaking. No distinguished breeder in the days of type-creation did his work in a few years. Our American breeders of eminence have been patient to wait in faith for hard improvement and the reward that inevitably follows a service of real merit. Animal breeding increases numbers quite rapidly, but it requires time to effect and fix changes in form. Men without patience cannot wait for the great satisfactions which time alone can bring in this field.

Because they lack patience many American farmers who establish herds, flocks and studs sell out and quit before giving pedigree animal husbandry a fair trial. If they do not make money from the outset they are sure it is the fault of the stock; or they quit or try another breed, class or system. Others, who may be less concerned about immediate financial returns but aspire to prominence as constructive breeders, lose interest because progress commonly is slow.

Stock breeding is not a fast-like recreation in which quick reward, in money or progress, is possible, except in a few frequent instances. No one should engage in the business with the expectation of being a notable exception to the rule. Whatever his qualifications and favoring conditions, to every beginner is practically sure to travel the long road of the masters, if he achieve ends comparable with theirs. No short cuts can be promised; the quick ways usually lead derelictly and expensively back to the main route.

Viewed in this light, the breeding of pure-bred stock is most attractive to the patient man who has a genuine passion to paint masterpieces with the wondrous pigment of time, and he will see again the reward along the way.

It is a privilege to believe in his money!

What he requires show virtues through the appropriations known corporations. Bear in mind that the figures are of people who are in of expensiveness.

Union Pacific Pacific—American Biscuits Standard Oil Sears, Roebuck & Co. W. Post. C. Med. I. Quaker Oats Amherst-Bushnell Kellogg Corn American Tobacco Armour Company Oliver Typewriter De Laval Separator Gold Dust Goodyear Tire Karo Corn Ivory Soap Cluett, Peabody American Raisin Pennsylvania Prudential Life International

Don't be expensiveness—do no—were it not would not be probably one of MERCE and that primitive our forefathers ago.

Advertising known aid to EXPERTS. EST AND GOODS, PROERY AND IF and at a price not for advance making possible distribution greater—poss reach.

Figures are show what is altogether—Corporations advertising. We far advanced the line, the Year by their advertising as they find TAYS THEM.

More and are coming to VALUE OF TRADE. That THE BU DAIRY FARM WHILE, for the increasing BETTER ADV DAIRY FARM AND "A Paper Far

XV

It is a pretty sure sign that one believes in a thing when he puts his money into it.

What better proof could one require showing that it pays to advertise than the figures representing the annual advertising appropriations spent by some well-known corporations and firms.

Bear in mind that these expenditures are considered by the people who make them as investments, not expense. Ample returns are imperative in all cases of expenditure like these:

Union Pacific and Southern Pacific	\$1,250,000
National Biscuit	1,000,000
Standard Oil	1,000,000
Sears, Roebuck	1,000,000
Coco Cola	1,000,000
C. W. Post	600,000
Gold Medal Flour	750,000
Quaker Oats	500,000
Ambler-Busch	800,000
Kellogg Corn Flake	500,000
American Tobacco	250,000
Armour Company	250,000
Oliver Typewriter	250,000
De Laval Separator Co.	250,000
Gold Dust	300,000
Goodyear Tire	300,000
Karo Corn Syrup	250,000
Ivory Soap	250,000
Cluett, Peabody	200,000
American Radiator	250,000
Pennsylvania Railroad	250,000
Prudential Life	150,000
International Harvester	100,000

Don't be led astray. These expenditures—tremendous as they are—do not come out of you.

Were it not for advertising you would not be familiar with probably one of these firms. COMMERCE and YOU would be in that primitive state such as were our forefathers of generations ago.

Advertising is the greatest known aid to distribution. IT EXERTS A MARVELLOUS POWER. It brings THE NEWEST and MOST RELIABLE GOODS, PRODUCTS, MACHINERY AND INVENTIONS to you and at a price, which, were it not for advertising helping in making possible wide and easy distribution, would be much greater—possibly beyond your reach.

Figures are not available to show what some of our leading altogether-Canadian firms and corporations are spending for advertising. While they are not as far advanced as our cousins across the line, they are advertising. Year by year they are increasing their advertising appropriations, as they find THE INVESTMENT PAYS THEM WELL.

More and more these firms are coming to appreciate THE VALUE OF THE FARMERS' TRADE. They are finding out that THE BUSINESS OF THE DAIRY FARMERS IS WORTH WHILE, for proof of which note the increasing volume of THE BETTER ADVERTISING IN THIS DAIRY FARMERS' PAPER—FARM AND DAIRY—

"A Paper Farmers Swear By"

Why He Refused to Join the Cow Testing Association

(Hoard's Dairyman)

Every community of farmers usually has one or more men in it who are not honest enough to promote their own knowledge or their final best interests. A certain percentage of farmers, as well as other men, think that small tricks and a portion of dishonesty are necessary to make money.

We are reminded of this by hearing why one farmer in this county would not join a cow testing association. In a moment of over confidence he disclosed the reason to a neighbor. It was because he did not want to know his poor cows, for then he could not sell them as good ones so easily.

Here is a man who from dishonest motives preferred to do business based on his ignorance, rather than on his knowledge. That man will never make a first class dairy farmer or breeder of cattle. He is instinctively dishonest and such men keep away from the larger truths of the business because they fear the light. They invariably grow smaller in mind and character and excite more and more the distrust of those who deal with them.

It is a big mistake for any man to start out in life with such narrow and stupid ideas. They bar him at once from the larger confidence of straight men. He fool himself badly if he thinks those alone who do not take his measure, for they do, and, as a consequence, they avoid dealings with him as much as possible.

But Then—It Pays

A writer in the Saturday Evening Post well and truly says:

Alfalfa demands good farming. It declines to grow on poor, wet, weedy, sour and untillable lands. Many fail with it on first trial. Some have become discouraged and called it hard to grow, yet it is almost a weed in its rank spread in specially favored localities. This fastidious nature has hindered its progress in the favor of careless farmers, who ignore its cardinal requirements. Its three simple demands are a dry, sweet, fertile soil; but these involve about all there is to good soil management, namely: drainage, liming for acidity when needed and adding the needed fertilizers, with proper tillage. Alfalfa refuses to be made a side issue; it demands the best field care of the farmer to establish it. It develops his patience, as it must be so sparingly the first year and must not be rudely trampled.

NO REST FOR ALFALFA GROWERS

Farming was not so hard before we knew alfalfa! complained a Kansas farmer. "There used to be occasional periods of rest, but now this plagued crop drives us the year round. In the spring, just as we are busy planting the corn, we must hustle away to cut that first crop of alfalfa. It won't wait; it must be attended to first. Then in June, when we're hoping for a few days' let-up, there it is, second crop ready and another hay harvest is on us. Late in July, when it is hot and sultry and the haymow is a steaming furnace, there is more alfalfa to harrow. In September we used to get a few days to visit our folks in the next county, but now that cursed alfalfa must be cut. Can't leave it or it spoils; and in October when the corn harvest is about over, there is another hay harvest. It's just cut, cut all the year—and that is not all. Our barns are full of the stuff, stacks fill every available lot and we are obliged to buy steers and lambs and pigs to eat it up out of the way of the next season's crops. Alfalfa is no crop for a lazy farmer."

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Hon. Clifford Sifton, M.P. from Ottawa
Prof. W. H. Caldwell, Sec'y Am. Guernsey Cattle Club
Dominion Experiment Farm, Napan, N. S.
U. S. Senator Knute Nelson, of Minnesota

and many others like them, good dairy farmers as well as great leaders in every sphere of human endeavor, each of whom is possessed of much personal experience and a thousand authoritative sources of separator information, are among the 1,375,000 satisfied users of DE LAVAL Cream Separators?

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International Harvester Company of America (Incorporated in U.S.A.)

Creamery Department

Better makers are invited to send contributions to this department, to ask questions on matters relating to butter making and to suggest subjects for discussion. Address letters to Creamery Department.

Accurate Cream Samples

L. A. Zufelt, Dairy School, Kingston, Ont.

In the early history of butter-making various devices were employed for the purpose of determining the amount of fat in cream with more or less accuracy, but since the introduction of the Babcock tester we can with a greater degree of speed and accuracy determine the amount or percentage of fat which the cream contains. If certain conditions are complied with. No one, I take it, will dispute the accuracy of the Babcock, the test itself is comparatively simple and accurate, and where errors occur they are due not to the machine but to the man.

SECURE A REPRESENTATIVE SAMPLE. In manipulating this test certain conditions must be complied with, the most important of which are that a representative sample of the cream first be secured and then the correct amount placed into the test bottle. The scale on the neck of the bottle is so graduated as to give the percentage of fat when 18 grams (or nine grams) of cream is used. If more or less than this amount is used and if

this amount does not fairly represent the cream from which it has been taken, then undoubtedly the result will not be accurate.

The pipette used is supposed to deliver 18 grams into the bottle, but as the weight of cream varies according as it contains a greater or less amount of fat and owing to the viscosity and other physical conditions of the cream, it has been seen that it would be utterly impossible to correctly measure the exact amount, and the only way to insure getting 18 grams into the bottle is to employ a set of scales and weigh it. The scales made for this purpose are reasonably accurate and will give results correct to within half and one per cent of the total amount, which is recognized as within the limit of error.

Taking a volume of water at a temperature of 60 that weighs 1,000 as a standard, the same volume of fat will weigh 930, whole milk 1,032 and skim milk, 1,036. The weight of cream will range anywhere between those, depending on the amount of fat which it contains. The greater the percentage of fat the lighter it will be, as fat is the lightest portion of the milk. The difficulty of measuring 18 grams from cream of varying richness is quite apparent, and the resulting error will be correspondingly great for if the pipette will deliver the correct amount, say for a 25 per cent cream, then with a poorer cream the same volume would weigh more than 18 grams, as we would be measuring a heavier substance, and if the cream were richer, then 25 per cent less weight would be delivered on account of it being lighter. The only correct method to employ is to weigh the samples if we wish for correct results.

To illustrate this more thoroughly, tests were made at the school of creams of varying richness with the following results:

Scales	Pipette	Scales	Pipette
14.2	15.0	33.5	32
21.0	21.0	34	33
25.0	25.0	35	34.5
27.0	26.5	40	38
28	27.5	42	42.5
29	29		

It is needless to comment on the above figures as they speak for themselves and show conclusively that in testing cream the samples should be weighed, not measured.

More Profit from the Hand Separator

In order to get the highest possible profit from a hand separator there are a few, but very important factors, which must be taken into consideration. Foremost among these factors is the selection of the machine. Many people fail to realize the importance of this factor and lose money by it.

Having selected a good separator, it is very important to get it set upon a level and solid foundation, in a clean and airy room. Much money has been lost because of the very fact that the separators have not been properly set up. The reason for the losses are two-fold.

First, if the separator is not well leveled and we hold down, it will shake and tremble all the while, thus causing a constant and unnecessary wear on gears and lushing, and in that way greatly shorten the lifetime of the machine.

Second, a trembling machine cannot do first class work, but will leave some cream in the skim-milk. This is a loss in profit, because butter fat while it is a good feed, is far too expensive for stock feeding. There are other feeds which are not only fully as good, but they are also much cheaper.

OIL BEFORE USING

In order to insure good running the separator should never be started before having been well oiled with good grade of separator oil. Even the best oil will in time 'gum-up' the

bearings and cause heavy running, vibration and extra wear. This can be easily overcome by flushing out the bearings with kerosene once or twice a month. The kerosene will also remove any dirt and dust particles which may have entered the bearings from the separator.

One of the greatest losses in profit during separation is caused because the separator has not been properly cleaned before the milk is let into it. When such is the case, the skimming is very incomplete and the machine is hard to turn. Besides it is utterly impossible to gain the full speed afterward. In other words, it is like pulling up hill all the time. A minute or two spent in starting the machine is economy all around.

30 PER CENT CREAM. When skimming, care should be taken to have the cream screw so regulated that a cream testing from 30 per cent to 40 per cent can be secured. Cream testing over 40 per cent is thick and sticky, and is apt to cause too heavy losses in transferring it from

Not Complete Without It

"We think that every copy of Farm and Dairy that reaches our home is an improvement on the former one. We take much pleasure and profit out of reading it, and its interesting and instructive columns. We think our home is not complete without the Farm and Dairy."—E. S. Beer, Durham Co., Ont.

one container to another. Below 30 per cent, the cream contains too much water, which could be used to good advantage for stock feeding at home. The creameries pay for the butter fat only. Besides a thin cream is much harder to keep sweet. The bacteria developing in the milk and not so much in the fat.

Put nothing but clean milk through the separator, and try to have the milk as nearly 90 degrees F. as possible when skimming because experiments prove it most economical.

Under no circumstance should a separator be used twice without cleaning. It is not a good habit to neglect washing each time the separator has been used, but it is poor economy as well, for besides making washing more difficult the next time, it causes poor work and extra wear on the machine. In addition the keeping quality of the cream is lessened.

The last factor to be considered in getting the greatest profit from the use of the hand separator is the care of the cream. This is important for two reasons.

First, cream is a good food product, and as such it ought to be well taken care of.

Second, many creameries have begun to pay for cream according to quality. This makes the question an economic one, since there is a difference of from one to three cents per pound of butter fat between first and second grade, and as much difference between second and third grade.

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Cheese

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

A Leeds Cheese

G. W. Brown, Leeds, Ont.

For the last few years the factory has been running on a factory, owned by a factory, which is built of cement floors, with roof. A spring water, which is pumped to a cistern in the factory, is pumped by an elevator into an evaporator. It was run for a half and a half time of the purpose of cheese.

This season I produced more cheese than as good this season as I have produced in three or four years. We paid out for the first 18 days \$21.12 a ton for 18 days.

Closures of

Frank Henna, Chatham, Ont.

For West

It would be better to turn in the cash returned, then to pay the milk.

1. The advantage of the separator is that it is to the advantage of the farmer to look after the milk, they are paid to produce milk. 2. To get the maximum return for the factory to the farmer, they are paid to produce milk. 3. Properly returned, they are paid to produce milk. 4. Properly returned, they are paid to produce milk.

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You will find that the Sharp's tubular cream separator is the best in the world.

THE SHARPLES TORONTO, CANADA.

Cheese Department

Makers are invited to send contributions to this department, to ask questions on matters relating to cheese making and to suggest subjects for discussion. Address: Editors to The Cheese Maker's Department.

A Leeds Cheesemaker Writes

G. W. Brown, Leeds Co., Ont.
For the last three seasons I have been running the Wilson Cheese Factory, owned by J. B. Wilson. This factory is built of cement blocks and cement floors, with a galvanised iron roof. A spring nearby supplies the water, which is carried through pipes to a cistern in the factory and is pumped by an injector into the boiler and into an elevated tank. The water around the curing room two and a half times through pipes for the purpose of cooling the room.

This season I made nearly 10,000 pounds more cheese than last. It was not as good this year for milk, but we have three more patrons and more cows. We paid our patrons \$28 a ton for the first 18 days of November and \$21.12 a ton for the whole season.

Conclusions on Pasteurization

Frank Hens, Chief Dairy Instructor for Western Ontario.

It would be best if no heat was returned in the cans. But if it must be returned, then—

1. The advantages of proper pasteurization overcome the objections. The patrons should bear the cost, and it is to the advantage of the makers to look after the details. Moreover, they are paid to do so.

2. To get the best results from pasteurizing makes it more necessary for the factory to provide means for disposing of the surplus whey and wash water, which improves the sanitary conditions.

3. Properly pasteurized whey may be returned sweet, is superior to ordinary whey for feeding purposes, especially for young animals. A less tendency to diarrhoea is also claimed. The value for feeding has been in many cases underestimated owing to the un-

satisfactory condition in which much of it has been returned.

4. Skimmed whey, casein whey, whey fed at the factory and creamery skimmed milk and buttermilk should be pasteurized. Home skimming protects the stock only from mixed skim-milk.

5. Buyers state that the loss on fruity flavored cheese is from 1-8 to 1-2 cent per pound. Pasteurization will diminish and in many cases eliminate the loss on fruity and some other flavors. This is dollars saved and improvement in quality. Offers protection to the stock from disease germs.

6. The tanks are more easily kept clean. If proper arrangements are made there is no excuse for not keeping them clean.

7. The cans are more easily washed but must be scalded whether they are pasteurized or not.

8. The factory must have a sufficient supply of water and a boiler large enough to furnish the steam required. The boiler is better close to the boiler and the pipes insulated. A tight valve is required between the boiler and the tank.

9. Large quantities of whey should not be left over in the tanks from day to day or wash water run in. Properly constructed septic tanks will handle the surplus effluent.

10. A test for acidity will show fairly well if the details necessary to proper heating are observed.

11. The tanks should be covered. Sound wood tanks are to be preferred to improperly constructed cement, while steel is better than either. Rotten wood tanks will not stand the heating and therefore have to be replaced, which is an advantage.

12. All the whey should be heated in the lower and then elevated to the upper tank. One tank, preferably both, should be large enough to hold one day's whey, which allows the tanks to be emptied each morning.

13. Unclean, sour whey has probably turned many patrons to the hand separator as has the same kind of skim-milk from whole milk creameries.

14. Pasteurization is not a panacea for improperly cared for milk. We have figures to show that out of 134 prices offered for cheese during the past two years, 93, or nearly 70 per cent, have been won by factories pasteurizing the whey.

Since the inception of the cheese industry the difficulties of satisfactory handling which have been before the cheese-making public.

Pasteurization may not completely solve the problem, but simple details are observed this method goes a long way towards doing so.

Canadian Seed Growers Meet

The subject of how to improve the productive qualities of the 40 million bushels of seed required in Canada each spring for seeding purposes is one which will occupy the serious attention of leaders from both Canada and the United States, at the eighth annual convention of the Canadian Seed Growers' Association to be held in Ottawa on February 8th and 9th. This is a problem of great national importance, affecting, as it does, the very foundation of our prosperity as a nation.

Among those who will address this convention are: Rufus Stimson, special agent for agricultural education, Boston, Mass.; Hon. Martin Burrell, Minister of Agriculture, Ottawa; Prof. C. C. James, Deputy Minister of Agriculture, Toronto; Prof. L. S. Klinek, Macdonald College, Q. B.; J. H. Grisdale, Director of Experimental Farms, Ottawa; Dr. O. E. Saunders, Cerealist, Experimental Farms, Ottawa; and Mr. G. H. Clark, Seed Commissioner, Ottawa.

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Tubular Cream Separators
Are the World's Best

Size of machine, No. 4 Tubular. Capacity per hour, 500 pounds. Total pounds separated, 2,000,000. Total turns of crank, 14,352,000. Total cost of oil, 75 cents. Total cost of repairs, 40 cents. Time used in oiling, 15 minutes. Time repairing and oiling, 20 minutes.

This wonderful record was made by a regular Tubular—just like Tubulars that are being replaced all over the world for dirt-travelled account telling all about it. You will finally have a Dairy Tubular which contains no disks, has twice the skimming force of others, skims faster and twice as clean. Repeatedly pays for itself by saving what others lose. Wears a lifetime.

Guaranteed forever by the oldest and biggest separator concern on the continent.

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Apply Box 5, FARM AND DAIRY.

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 \$500 to \$700 lbs. milk per 24 hr summer address. **FRED S. HADLER, GREEN LEAF, WIS., U.S.A. R. R. No. 3, Box 6**

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WANTED—Position as manager of creamery. Can furnish references. Apply to H. E. Doups, Petrolia, Ont.

WANTED—Buttermaker for Kerwood Creamery. Apply, stating experience and salary wanted.—W. Wadell, Kerwood, Ont.

WANTED—First Class Buttermaker, for Creamery. References required. Six months' run guaranteed. Apply stating salary, to The Saskatchewan Creamery Co., Amnabehn, Sask.

WANTED—Young man to drive cream wagon. Must be good with horses, neat and clean. Steady job by year to right man. Box 125, Farm and Dairy, Peterboro, Ont.

CREAMERY FOR SALE—Doing splendid business. Everything in first class condition. 150 tons lot put up for next season. A splendid opportunity for right man. Box 26, Farm and Dairy, Peterboro, Ont.

FOR SALE—Very cheap, as owner is going to the west, splendid outfit, practically a new 14 H. P. boiler and 10 1/2 H. P. engine, very suitable for butter making, or cheese factory. Correspond with P. D., Box 64, Cayuga, Ont.—J. J. Murray & Co., Cayuga, Ont.

The day sessions will be held in Room 7, Dairy and Cold Storage Branch, Canadian Building, while the evening session of Feb. 8th will convene in the Railway Committee Room of the House of Commons. All who are interested in the "Good Seed" movement should do their best to be present at this convention. Programs may be had on application to the Sec. C. S. G. A., L. H. Newman, Ottawa.

The Corn Show

Two of the features of the Corn Show held at Tilbury, Ont., last week were the farm case and barn in corn architecture shown by the farmers of Tilbury East, and the corn summer house in bungalow design in the exhibition of the Romney Farmers' Club. These are but two of the many ingenious ways in which the members of the Ontario Corn Growers' Association showed to visitors at the fair the wealth that lies in the corn lands of Ontario.

All of the competitive classes were well filled and competition was keen. Some of the award-winning prizewinners were: Best 10 ears flint corn, L. D. Hankinson, Graveness; single ear dent corn, T. J. Shepley, Oustry; best 10 ears sweet corn, A. E. Wismer; best five ears, any variety, shown by boy or girl under 16 from Tilbury East, Harold Shepley, Oustry; best display of Farmers' Clubs, Tilbury East Farmers' Club.

I received my pure bred Yorkshire sow that you ordered Mr. Alex. A. Watt, of Brucefield, Ont., to send me as a premium for securing six new subscriptions to Farm and Dairy. She is a dandy and looks as though she would be a good brood sow.—T. Strachan, Wellington Co., Ont.



WISDOM is knowing what to do next. Skill is knowing how to do it, and virtue is doing it.—Jordan.

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. U. section man living in Milford, Mass., receives a large sum of money from the relatives of a young Irishman who 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 unkind 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. He is introduced to the children at a country school. Tom Steadman, a bully, in a game of shindy, intentionally strikes with his club Libby Anne, who is introduced to the children at a country school. Tom Steadman, a bully, in a game of shindy, intentionally strikes with his club Libby Anne, who is introduced to the children at a country school. Tom Steadman, a bully, in a game of shindy, intentionally strikes with his club Libby Anne, who is introduced to the children at a country school.

HE had only one thought—to get away—to get away where no one knew him. In the last few hours the whole world had changed for him—that Mr. Burrell should so easily believe him guilty had lessened his cup of bitterness.

A red and silver scripture text in the form of a shield, hung on his bedroom wall; Martha had given it to him, some time ago, and it had often brought him comfort and inspiration.

"He is able to deliver you," it said.

Bud read it now scornfully, and with a sudden impulse tore it down and crushed it in his hands.

"There's nothing in it," the boy cried bitterly.

He went out to the pasture and whistled to his pacing colt, which came to him at once. The boy laid his head on the colt's velvet neck and nuzzled it lovingly.

"I'll come back for you, Bunko," he said. "You're mine anyway."

The colt rubbed his head against Bud's arm.

Across the ravine, where the fringed blue gentian loomed up from the sere grass, the cows were grazing, and Bud, from habit, went for them and brought them up to the bars.

The sun was setting when Bud reached the Cavers's house, for he could not go without saying good-bye to Libby Anne. She was driving their two cows in from a straw stack, and called gaily to him when she saw him coming.

"I've come to say good-bye, Lib," said Bud simply.

"Where are you going?" she asked.

"I don't know—anywhere to get away from here." Then he told her what had happened.

"I'm glad you took a smash at Tom Steadman," she said, her big eyes flashing, when he had finished. Then suddenly she began to cry. "I don't want you to go," she sobbed.

"You won't ever come back; I won't ever see you again."

"Don't say that, Libby," Bud cried in real distress—she looked so little and pale in her black dress "I will

come back some time, and I won't forget my little girl. You're my girl, you know, Lib."

"I'm your girl all right," the child said unsteadily. "But I want you to stay. I can't make up things like Pearl and Mary Watson can—I can't pretend about you."

"I'll know you're gone all the time," Bud said, and she caught her breath in a quivering sob.

Then Bud lifted the little girl in his arms and kissed her over and over again.

"Don't cry, Libby," he said. "I'm going away to make lots of money, and you mustn't fret. I can't pretend about I want you to say to yourself: 'I'm Bud's girl, and he won't forget me,' and whenever you get lonely or down-hearted, just say that. Now, Libby Anne, tell me who you are."

"I'm Bud's girl, all right," she answered gratefully.

The sun had gone down in a crimson haze, and a misty tenderness seemed to brood over the world. The September evening was so full of peace and beauty with its muffled tinkle of cowbells and the soft sough of the whippoorwill that came at intervals from the maple bush on Oak Creek, it was hard to believe that there were troubled hearts anywhere.

The hoarse whistle of a long freight train on the C. P. R. boomed harshly through the quiet air. "I must go, Lib," said Bud.

Libby Anne stood looking after him as he went quickly down the road. The evening twilight soon hid him from her sight, but she still looked down the winding road as it dipped down in the valley of Oak Creek.

Suddenly from the river bank came the weird cry of a prairie wolf, and Libby Anne, turning with a shudder, ran home in the gathering dusk.

CHAPTER XXII.

AUTUMN DAYS.

There's a wonderful charm in the autumn days,

When Earth to her rest is returning;

When the hills are drowned in a purple haze,

When the wild grape sweetens, and all in a blush,
Of crimson the maples are turning.—Helena Coleman.

When autumn came to the Souris valley and touched the trees with crimson and gold, it found that some progress had been made on the farm that was getting its second chance.

Down on the river flat the hay had been cut and gathered into two stacks, which stood beside the stable, and the two Watson cows now fattened on the rich growth of after-grass.

The grain, which had been an abundant crop, had been threshed and drawn at once to the elevator, for there was no place to store it; but as the price was one dollar a bushel for the best, and seventy cents for the poorest, John Watson had no cause for complaint. The staves, which he had built of poles, was now roofed by a straw stack and was intended for a winter shelter for the two cows.

In the early spring Pearl had planted a bed of Polly's poppies, and all the golden and blue and brilliant against the poplar grove behind the house, which sheltered them from the winds. The weeds around the buildings were all cut down and ferns were planted for a garden the next year. In the holidays the boys had fenced this with peeled poplar poles.

A corner of the wheat-field before the house had already been used for a garden, and had been a great source of delight and also of profit to the family. The boys had complained at first about having to pull mustard and turnip weeds and french-wed, with which the farm was infested, but Pearl presented weed-pulling in a new light.

She had two foraging parties, who made raids upon the fields and brought back the spoils of war. Patsey was Rhoderick Dhu, who had a buckskin bold, called Daniel the Redhead, and Tommy was Alan-bane, and Tommy was to have been his henchman, Thomas Trueman, but Tommy had strong ideas about equal rights and would be Alan-bane's own brother, for many a time they were all dark-visaged, eagle-eyed Highlanders, who made raids upon the Lowlands to avenge ancient wrongs.

Pearl had learned about the weeds at school, and soon had her whole family, including Aunt Kate, organized into a weed-fighting brigade. The garden was ruthlessly cut down, and Mary, who was strong on experiments, found out that its roots were good to eat. After that any dandelion that showed its yellow face was simply inviting destruction.

In school Pearl was having a very happy time, and she and her teacher were mutually helpful to each other. Pearl's compositions were Mr. Donald's delight. There was one that he carried with him and often found inspiration in to meet the burdens of his own monotonous life. The subject was "True Greatness," and suggested by a lesson of that name in the reader. Needless to say, Pearl's manner of treating the subject was different from the reading lesson.

"A person can never get true greatness," she wrote, "by trying for it. You get it when you're not looking for it. It's when you have good clothes—it makes it a lot easier to get decent—but it is a sign of true greatness to act when you haven't got them just as good as if you had. One time when Mr. Burrell and little girl Bill, that broke his leg. They thought they would have to kill him,

but next morning they found him propped up sort of sideways on his good leg, singing! That was true greatness. One time there was a woman that had done her hair and hung it on the line. The line broke, and let it all fall down in the mud, but she didn't say a word, only said it over when she spread it on the grass, and when it wouldn't fall. But that night a dog with dirty feet ran over it. When the saw that was done, she sat down and didn't cry, and she said: 'Ain't it queer that he didn't miss nothing?' That was true greatness, but it's only people who have done washings that know it. Once there was a woman that tried to eat a pig-pen, and when the wind blew that way it was very smelly, indeed; and at first when she went there to live she couldn't smell anything but straight pig, but when she lived there a while she learned to smell the clover blossoms through it. That was true greatness that know it."

Camilla's wedding had been a great event in Pearl's life. It had taken place early one Wednesday morning in the church at Milford.

It was a pretty wedding, the paper was pink, and the church was scented with wild roses and sweet perfume made Pearl think of schoolbooks—she always kept her desk full of rose petals, and to her it was a real good thing.

Mr. Burrell and Mr. Grantley both took part in the ceremony, to show there was no hard feelings, Pearl thought; for Camilla was a Presby-terian and Jim was a Methodist.

Mr. Francis brought Camilla in, and Pearl followed. Jim and the doctor stood at the altar, while down from the choir-gallery, which seemed to be overflowing with roses, came the strains of the wedding march. Pearl had never heard it before, but it seemed to her now as if she had. She was known to, for in it throbbled the very heart and soul of her own heart. It was all over in a minute and they were coming down the aisle, her hand on the doctor's arm, and the carriage was waiting for them at the door, and she drove back to the house, everybody talking and laughing and throwing rice.

When the wedding breakfast was over, and Jim and Camilla had gone on the train, Pearl and the doctor and Mr. and Mrs. Francis drove back to the house. Everything was just as they had left it—the flowers were still on the table, and the big clock in the hall was still going, and it seemed a long, long time that they had been away. Mrs. Francis was quite worn out by the efforts of the morning, and must go to bed.

Would Pearl box up the wedding cake in the little white boxes? It is a severe strain to lose Camilla," she said, "even for two weeks. Two weeks is four days, and that says 'Means forty-two meals without her.'"

"We'll attend to the wedding-cake and put away presents and run things generally," the doctor said.

In the dining-room Dr. Clay put up the wedding-cake and packed it in boxes for mailing, while Pearl quickly cleared away the dishes. She was quite a pretty little girl in her white silk dress. She was tall and slight, and like and graceful in her movements, with pansy-brown eyes and a smooth, olive skin that neither sun nor wind could roughen. But the beauty of her face was in the serene expression, which comes only to people whose hearts are brave and sweet and honest.

The doctor watched her with a great admiration in his face. "Pearl, are you are you?" he asked suddenly.

"I am fifteen," she answered. (Continued next week)

The Up Surrender

For I came down to do mine own
Him that sent me

It seems that ourselves first, and dear to us, and also living so self centered to get beyond our dead, are our lives part unhappy, but true happiness can be found where selfishness

The man and whose affections a family circles—the same also living. They are like flowers that can grow and develop God's love means that the cause the moved and they in the full light shining.

Christ came to sinners in order to show us how we always, did more the example of His should live. He set possible words a restricted life, about everywhere sick and the need for healing. Suffering received long inspiration to live to the children were arms and He loved

That is the life of love, the best that we here to do our own will for us. He lose our lives in agony and find them again in the very best that we so it will be given Good measure, press together, and run give unto us. We should love ourselves and that our who may be in need

We are to be kept by the manner of our lives are as they learn in good, very simple tests, apply them to our apply them every day will see how they as we give unto us into us again. As in the spirit of unshowered back on

words are spoken to this we find how the same measure of love is it measured with

If we are unhappy we are too self centered to love God better agree to carry our matter. We had we a new power and a new part in our hearts. It humble or how exalted may be, whether we matter. We had we a new contentment, doing the will of of in heaven. Troubled and empty pleasures or lines of endeavor

Aid for the Printing is of fr days of torrid w weather occurs in places nisphere is close o

The Upward Look

Surrendering our Wills

For I came down from heaven, not to do mine own will, but the will of Him that sent me.—St. John 6.30.

It seems natural for us to think of ourselves first, of those who are near and dear to us next and of all others after. There are some of us who seek to get self centered we find it hard to get beyond ourselves. Narrow, indeed, are our lives, and for the most part unhappy, when this is the case. True happiness can never long abide where selfishness reigns.

The man and the woman, also, whose affections are bounded by their family circles—there are thousands of such—are also living restricted lives. They are like flowers growing in the shade that can never know what true growth and development is, and what God's love means until the obstacles that confine the shade have been removed and they are enabled to bask in the full light and warmth of the sun.

Christ came to the earth and dwelt among us in order that He might show us how we should live. He, however, did more than show us by the example of His own life, how we should live. He told us in the plainest possible words. His life was not one of a restricted life. Instead He went about everywhere doing good. The sick and the needy came to Him and found healing. Sinners sought Him and received forgiveness and a new will in His life. He taught the children were received into His arms and He loved them.

That is the life that He desires that we should live. Like Him, we are not here to do our own will, but to do His will for us. He told us that as we lose our lives in service for others we shall find them again; that as we give of the best that we have, we shall so it will be given unto us again. Good measure, pressed down, shaken together, and running over shall men give unto us. He told us, also, that we should love our neighbors as ourselves and that our neighbors are all who may be in need.

We are to be known as His disciples by the manner in which we love. Our lives are to be judged by the fruit they bear in good deeds. These are very simple tests. Each of us may apply them to ourselves. We should apply them every day. As we do we shall find that just in proportion as we give unto others God is giving unto us again. As we do kind deeds in the spirit of unselfish love, love is showered back on us from all sides. As we speak kind words to others, kind words are spoken to us in return, and thus we find how true it is that with the same measure we mete unto others, it is measured to us again. (St. Luke 6.38.)

If we are unhappy it is because we are too self centered. As we learn to love God better He will give us grace to carry our troubles lightly, no matter what they may be, and a new power and a new joy will spring up in our hearts. It matters not how humble or how exalted our lot in life may be, whether we are a Lazarus or a King David we can find true peace, true contentment, true joy only in doing the will of our Father Who is in heaven. Trouble, dissatisfaction, and empty pleasures lie along all other lines of endeavor.—I. H. N.

Aid for the Fainting

Fainting is of frequent occurrence in days of torrid weather. It usually occurs in places where the atmosphere is close or the air impure,

and is simply a loss of consciousness, due to the diminution of the blood supply to the brain.

Fainting usually lasts only a few minutes, and the person recovers immediately when taken out into the fresh air. A recent issue of The National Magazine gives the following very simple "first aid" method of treating fainting:

"Take the person out into the fresh air, lay him flat on his back, with the head lower than the feet. This can be done by grasping the feet and holding the body so that the head hangs back, or take an ordinary straight back chair, turn it over so that the back forms an angle with the floor, and place the person on the back of the chair with the head hanging down. This position with the head hanging down favors the flow of the blood back to the brain.

"All tight clothing about the neck and waist should be loosened. Smelling salts or aromatic spirits of ammonia applied to the nostrils and cold water sprinkled on the face, chest and hands help to restore consciousness."

Father's Influence in the Family

Miss Alice A. Ferguson, York Co., Ont.

We hear and read so much of the mother's influence over her family, that often a father's influence is overlooked, and fathers

are apparently not so credited that it is the mother's duty to bring up the family in the way it should go, and have permitted the responsibility to rest upon her. We have no mother's magazines for fathers? And we've never heard of a father's magazine for fathers? And

yet a father's precept and example establishes a precedent for coming generations to follow. What father thought or said, or did or did not become a rule oftentimes for his sons and daughters. A father's example and influence is, therefore, of paramount importance. The responsibilities of fatherhood are weighty, and should be taken seriously. He may make or mar the future usefulness of his children. Therefore, the subject is well worthy of our consideration.

The father's first parental duty is to provide for the needs of his family. A father who is able to do so shouldered that burden, and beneath our constitution, the influence for good is nil. "Everybody works but father" should not be a truism except in cases of invalidism or superannuation, and then he makes the most of his ability to earn not only necessities but luxuries for his family. His occupation, whether by use of brain or brawn, is honest and ennobling.

ALL EQUAL AS FATHERS

I remember once hearing three schoolgirls discussing the relative virtues of their respective fathers. One declared that her father was the greatest because he had been a member of Parliament. A second maintained that her father was just as great, because he was a justice of the peace. The third, defiantly and indignantly protested that her father was just as great as either of the others. And true; of the three men, the honest farmer was held in as high esteem as the other two, and not the position the man occupied, but the man himself who counted with his daughter.

After work comes pleasure, and the father's pleasures should be such that he can share with his family. A man

who considers it his legitimate right to obtain his pleasure by frequenting bar-rooms or pool parlors, or in any such questionable manner, including in expensive pastimes for which his family must suffer. While the man who partakes of his pleasures in the bosom of his family, is welding a golden chain to bind his children to himself and to their home. A lady once told me that her husband rarely went from home but he brought back for her or candy or fancy biscuits or anything out of the common food lines, maintaining as he did so that as he did not use tobacco or liquor, he brought his treat home to share with his family. You may rest assured that that father never failed of a welcome when he returned, and you can see the eager delight of the young people and the shining eyes of his wife as together they shared the good things.

PLEASURE OF THE POOR

A poor farmer, who can give his family few pleasures or luxuries, hitched his team to a light wagon, and takes his wife and family around the block for a drive. It is a rest for his wife and a delight to the youngsters. If it fails should take a jaunt alone, as he is lawfully entitled to do, he can share it with his family afterwards by telling them of all that was interesting, pointing out his route, and letting them see what he saw, and they enjoy it, and thus the children and father become more intimate.

A father influences largely the literature that is read in the home. The publications for which he subscribes give their tone to the intellectual bent of the family. Good clean publications, with intelligent suggestions and high standards of morality, all help to shape the future lives of the readers. Father reads and discusses the topics of the day with the boys and girls. They read and enjoy and benefit intellectually and morally by it. If the father can afford books, adding with care to his library and seeing out any of a questionable character, he knows that his family has healthy reading, and this tends to healthy morals.

THEY DO AS YOU DO

The manner in which a father treats his wife and other women will make a lasting impression on the minds of his children. If there is in his manner a want of respect, a thoughtlessness, or in speaking of women in general he speaks slurringly, he need not wonder at the ruin he is preparing for his children. If his father errs in such a way on the path of chastity, need we wonder if his sons take an ell? While, if he shows respectful love for his wife and honours his mother, he is teaching one of the greatest and purest lessons to his family.

The father influences largely the future occupations of his boys and girls. He carefully notes their talents in different directions, and encourages and assists along the lines he considers best, encouraging and stimulating and giving wise direction.

THEY WILL CALL HIM BLESSED

A father who embodies the true spirit of fatherhood is one for whom his family may rise up and call him blessed. The father's influence should be such that while he has authority to rebuke or chastize, yet he will be held in loving respect and love by his children. He should be his son's first confidant and his daughter's best chum.

A father who asks the grace before meat and conducts family worship with reverence and evident enjoyment sets an example to his sons, who see that it is manly to participate in such religious exercises and a worthy example to follow. A nation of such fathers will be a righteous nation, and one which God will bless.

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Games in the Home

Games fill an important place in home life. As soon as the supper things are put away it is nice for the younger members of a family to gather around the table and join in playing games. It strengthens home ties. Since the players are of different ages the older ones may have to exercise a little patience, but patience resembles muscle in that it develops with exercise. The rules of any game should be thoroughly understood, and then adhered to strictly, and without dispute. There is nothing so fair as play. Perhaps father and mother will occasionally join in the game and the whole family spirit will be improved by the bit of recreation.

What games to play is an individual question. Checkers and dominoes will ever hold their well deserved places. There are a number of others which are classed as "educational games" which are instructive as well as entertaining. They include arithmetic, history, geography and literature, all being quite similar to authors, the strong feature of these games is that facts and facts are learned almost without knowing it.

These home games may be used as an evening's entertainment for a small company of young people in the following manner. Provide a number of tables and each with a different game. The tables should be numbered 1, 2, 3, etc., and four persons should play at each. When the game at table number one is completed a signal is given and the one at each table go to the next higher table, while the winners at table No. 1 go to the lowest table.—Western Farmer.

Household Hints

Onion skins should be boiled in soup, as they make the liquor a nice color.

Sweet orange peel, if dried and powdered, makes an excellent flavoring for cakes and puddings.

When stewing prunes add a handful of stoned raisins to every pound of prunes. This is a great improvement on the ordinary method.

Delicate cretonnes may be washed in a lather made of Castile soap and warm water. This soap contains nothing which will injure the fabric.

Badly stained lamp chimneys may be cleaned by rubbing with methylated spirit. If the stain be very obstinate, add a little whitening.

Boots that have become hard from wearing in snow or wet weather can be softened by being rubbed with mutton fat.

To keep carpets fresh looking, wipe them over once a month with a cloth wrung out in ammonia and water. This must be done after sweeping.

After washing a teapot dry thoroughly and leave the lid off so that air may enter. Remember it is impossible to dry the spout, and if you close the pot tightly it will very likely smell; mussy.

To keep lemons hang them up separately, so that they do not come into contact with anything. This prevents the juice remaining in one place, which is certain to decay the fruit.

A hair-ribbon should never be ironed. Make a warm lather, wash the hair-ribbon and rinse it in warm water, then wind it round a glass bottle. When dry, it will look as good as new.

When ironing, place a newspaper between the sheets of the ironing cloth. This will prevent the article being ironed from curling up, as is very often the case if the newspaper is not employed.

TO DRY-CLEAN LACE COLLARS
Mix white flour and bran together and gently rub this mixture with a clean piece of flannel into the collar, which should be stretched out on a hard surface. Rub with a brush over with a stick. If necessary repeat the process.

FOR COOKING VEGETABLES
All vegetables, except potatoes should be put into boiling water. All except peas and beans should be boiled with salt—boil peas with sugar;

beans with fat. Roots should be boiled slowly with the lid of the saucepan on. Boil green vegetables quickly with the lid off.

Slices of cold pork, seasoned with pepper and salt, fried on both sides, and served with apple sauce, will make a tasty dish.

Save the water that meat, fish, haricot, beans, or rice have been boiled in. It contains nourishment, and is an excellent foundation for soups.

To clean front jars that have been exposed to dust and dirt, possibly left open, just throw into them a small handful of sand and a little cold water. Shake a moment and you will be surprised at the result. They come out at clean as new.

A never failing rule to follow in placing sleeves is to measure one-inch lack of the shoulder seam, and sure one-half of the arm hole, and place the underarm of sleeve at this point.

THE COOK'S CORNER

Recipes for publication are requested. Inquiries regarding cooking, recipes, etc., gladly answered upon request, to the *Domestic Editor, Farm and Dairy, Peterboro, Ont.*

SALAD OYSTERS

Ingredients—1 tin of oysters containing about a quart, 1 head of celery, 1 tablespoonful of oil, 1 small teaspoonful of salt, made mustard and pepper, 3 dessertspoonfuls of cider vinegar, a pinch of white sugar. Strain off the liquor from the oysters and cut them up (do not chop them), mince the celery and blend with the oysters. Mix the remaining ingredients, putting in the vinegar last, then pour over the celery and oysters. Stir well, and serve directly, as this salad will not keep long.

SOUP CAKE

Ingredients—1 lb. of flour, 3 oz. of warm water, 8 oz. of sugar, ½ pt. of milk, 3 eggs, ¼ lb. of currants; 1 teaspoonful of carbonate of soda, grate in a quarter of a nutmeg. Beat the whole well and lightly together. Remember that the soda should only be stirred into the ingredients just before putting it (in a well buttered pan) into the oven. Bake it for about an hour and a quarter.

RICE CAKES

Ingredients—8 oz. of rice flour, 4 oz. of white sugar, 4 oz. of butter, 3 eggs. Work the butter to a creamy substance, add the sugar and flour, and mix in the well whisked eggs. Roll upon pastry board and shape into cakes with a cake cutter. Bake in a slow oven.

COCONUT PIE

Ingredients—1 cup of grated coconut, ½ pt. of milk, 2 crackers, 3 eggs, butter, salt, rind of ½ lemon, sugar if desired, puff crust. Make a nice puff crust, line a dish and bake, when done, set aside to cool; soak the coconut in the milk, pound the crackers, well whack the eggs, and grate the rind of the half lemon. Mix all together, adding a little salt, sugar and butter. When well mixed place in the pie dish, and put in the oven to slightly brown.

RASPBERRY PUDDING

Ingredients—1 pt. of bread crumbs, 1 qt. of milk, 2 cupfuls of sugar, 1 lemon, butter, a cupful of preserved raspberries, 4 eggs. Mix the bread crumbs, milk, two cupfuls of sugar, the peel of the lemon grated, the yolks of the eggs, and a small piece of butter, and bake. When done spread over the top a cupful of preserved raspberries; put over that a meringue made with the whites of the eggs, a cupful of sugar and the juice of the lemon. Return it to the oven to color; let it partly cool and serve it with rich cream.

The Sewing Room
Patterns 10 cents each. Order by number and size, for children, give age, for adults, give bust measure, for waists, and waist measure for skirts. Address orders to the Pattern Department.

BLOUSE WITH FRONT CLOSING, 7250



The new blouse that is closed at the front is so comfortable and stylish that every woman welcomes a new design made in this way. Here is a model that is chic in the extreme. It includes the new kimono sleeves that are sewed to big arm-holes and that are shapely beneath the arms, so that it can be finished with or without a collar and with or without the stock collar.

For the medium size will be required 2 1/2 yards of material with 3 1/2 yard of silk for the trimming and 7 1/2 yard of all-over lace and 7 1/2 yard of lace 7 inches wide.

This pattern is cut in sizes for 34, 36, 38, 40 and 42 bust measure.

GIRL'S ONE-PIECE DRESS, 7291



The girl's dress that is made with body portion and skirt in one is exceedingly smart and always popular. This one is closed at the front. It is very front. It is very front for the girl herself to adjust and it can be worn over any preferred gaiters.

For the 10 year size will be required 4 1/4 yards of 36, 2 1/2 yards of 36, 2 1/2 yards of 44 inches wide with 3 1/2 yard 27 inches wide and 3 1/2 yard of broadcloth or cuffs.

4 1/2 yards of banding to edge collar and cuffs.

This pattern is cut in sizes from 8 to 12 years of age.

TWO-PIECE SKIRT FOR MISSES AND SMALL WOMEN, 7321



The two-piece skirt is a pronounced favorite. It gives the seamless effect at waist and back that is so much liked, although it is made with a pointed inset on the front that lap onto the back to form a novel trimming or plain, just as preferred.

For the 16 year size will be required 2 1/4 yards of material 36, 44 or 52 inches wide, width of skirt at lower edge is 2 yards for 18-year size.

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

The best place to keep patches is in a drawer that may be open out, and rummaged in easily; if, however, you must keep them in a bag, pin on the outside samples of the goods contained in it. This will save many a fruitless search and a needless temper, for there is nothing more annoying than to turn out bag after bag of pieces and spend precious time searching in vain.

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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

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H. LORNE LOGAN, Manager
Brookville, Ont.

AUCTIONEER My lifetime has been devoted to Breeding Holsteins and selling Dairy Cattle. Have made sales from the Atlantic to the Pacific. My experience is to sell—ROBERT E. HAGER, ALGONQUIN, ILL.

Lyndale Holsteins

Offers two young bulls born September, 1911, one of them from a tested daughter of the famous Ontario bred sire, and a son of a 20.5 lb. yearling daughter of Hungerford B. KOL.
BROWN BROS., LYN, ONT

We Have **RECORD OF MERIT and RECORD OF PERFORMANCE** Reg. Holsteins
Young bulls for sale from a few days old up to fit for service. An exceptional lot and dirt cheap. Cut rates for the next 30 days.
E. GILBERT FAYNE'S MILLS, ONT.
Phone conn. at St. Thomas.

RIVERSIDE HOLSTEINS

Head bred by Prince De Kol Pouch dam was champion two years in succession at Guelph Dairy Test.
King Johanna Pontiac Korndyke; the records of these two champions on sire's side average 32.12 lbs. His dam, sister to two World's Champions 37-lb. cow, Pontiac (Oltshire) and Pontiac Pat.
Young Bulls and females for sale.
J. W. RICHARDSON - Caledonia, Ont.

FERNDALE STOCK FARM

Clydesdale Horses and Holstein Cattle
For sale—Four Bulls, 10 months old, got by Korndyke King Schilliar, who is closely related to Pontiac Korndyke, who sired two 37-lb. cows.
Also 20 Grade Cows, due to freshen in January; 15 Grade Heifers, rising 2 years and bred to freshen in March and April.
PIFFERELLER BROS., ELGIN, ONT.
Bell Phone.

LAKESIDE DAIRY AND STOCK FARM

Offers two bull calves, one 5 months and one 1 month old. Book your order for bull calves for the spring's crop. Also a few cows.
W. F. BELL, BRITANNIA BAY, ONT.
Ottawa Bell Phone.

KNIGHTLODGE HOLSTEINS and YORKSHIRES

Holsteins from two to five years old. We have several of some of the leading sires.
Four-year-olds giving as high as 15,000 pounds of milk in one year.
Yorkshires of either sex and different ages.
KETTLE, WILSONVILLE, ONT.

GETTING TIRED?

Are you getting tired of waiting for buyers to come along? Don't wait for them. Use our progressive "brooders" to go after them. The beauty of this medium for you is that you advertise your cows within your reach, and you may have buyers. Space like this, you can have only 98 cents in Farm and Dairy, and makes nearly 13,000 possible buyers, better and longer, to-day—**Farm and Dairy, Peterboro, Ont.**

Clydesdale Stallion For Sale

Registered Canadian-bred Clydesdale Stallion, 4 years old. Nice field brown in color with white points. Sire Norman Matchless; dam, Queen of Roses. Apply,
W. J. Cox, Box 73, Peterboro, Ont.
Phong 1387

MARKET REVIEW AND FORECAST

Toronto, Monday, Feb. 5.—The continued cold weather has been kinder to the farmer than his city brother. High prices on farm produce have been accompanied by an abundance of work in country, and many are in want. The westers are coming in improving, and order prices quite favorably with this time last year, but there is room for much improvement.
On the produce market dairy produce shows a further advance, and well it might, considering the prices of food feeds. All lines of grain are strong and most lines have advanced sharply. Beef cattle are steady. Small meats are stronger.

WHEAT
What prices have now shot up to \$1.5. A great decrease in winter shipments as compared with previous weeks was the largest factor in the advance. Old world cables strengthening immediately. They do not show any great improvement. Only small shipments find their way out of the

MISCELLANEOUS

WANTED—Volumes No. 2, 3, 5, 6, & 7. Holstein-Friesian Herd Book, also Babcock Tillsonburg.—Box 34, Tillsonburg, Ont.

HILLSIDE YORKSHIRES FOR SALE
Chicoin young sows and boars, three months old. Bred from modern type Yorkshire stock. Pedigree records and Breuffel. Ont.

HOLSTEINS

A \$25.00 REWARD
To anyone who buys Holstein bull calf that I am offering, ready for service, from my farm, I will give \$25.00. I have a son of R.O.P. in, weighing 15,000 lbs. dam, Maple Grove, bred by DeKol, whose male 17½ lbs. individual in 7 days. 2-year-old sows, straight individual. In the list invited.

ELIAS RUBY, R. R. No. 5, Tavistock, Ont.
The first \$50 cheque will buy him.

\$55 TWO YOUNG HOLL STEIN BULLS \$55
For sale. Prices \$55 each, fit for service. One is an official record of 18 lbs. bred with days as a 2-year-old, the dam of the other is equally as good but no official record. They are both by Canby Bull, formerly owned by Geo. Rice, Tillsonburg, he by Brookhamp Butter Baron, bred by both low and blocky and choice in more than that white. Write or phone direct. C. This will, Miss Craig, Ont. Mid-February. This ad will only appear once.

FOR HOLSTEIN BULL CALVES

Bull calf, born Feb. 2, whose first near set dams average 27 lbs. of butter in 7 days. Another bull calf, born Jan. 2, in Canada, of her age to me, 20 lbs. of butter in 7 days. Bull calf born Jan. 18; dam, daughter of a 20 lb. cow, 21 days with official record at 3 years and 13 lbs.—10 lbs. of butter in 7 days. Also 2 two-year-old stock bull.
David Cuthell, Vermouth Cent. Ont.

High Testing Lynden Holsteins

W. N. G. Nigler Korndyke De Boer at head of Lynden Holsteins Lulu Glaeser per cent. fat. He sired, having tested 479 lbs. of butter, 7 days testing, 4.38 per cent. fat. Champion 3-year-old living in Canada.
Buy a bull to head your herd, a full brother to the above sire. Also a son of fat at a 7.25 lb. cow testing 43 per cent. fat at 11 years. This is the record in Canada by a cow over 10 years old. Also bull calves, 2 years and see them. Within 1 mile of station.

S. LEMON, LYNDEN, ONTARIO

country. Quotations are as follows: No. 1 Northern, \$1.13; No. 2, \$1.09; No. 3, \$1.06; feed wheat, 72c to 73½c. Ontario wheat has advanced in sympathy. No. 2 winter wheat is now 56c, 56c.

COARSE GRAINS

Every grain except peas has advanced in price this week. Malt barley is particularly strong and prices are usually maintained at 95c to 96c; feed, 65c to 75c. C.W. oats are strong at 31c for No. 1; Ontario oats, No. 2, 40c; at country points, 46½c track here; No. 3, 45c; wheat, 72½c; peas, \$1.15 to \$1.20; buckwheat, 65c to 66c; and rye, \$1.04 to \$1.06. At Montreal the market is strong, oats and corn being in particular demand. Quotations are as follows: Barley, malted, \$1.10 to \$1.01; oats, C.W. No. 2, \$1.50 to \$2c; No. 3, 49½c to 50c; No. 2, 49c to 49½c; No. 3, 48c to 49½c; No. 4, 47c to 47½c; buckwheat, 75c to 76c.

MILL STUFFS

Prices are steady at last week's quotations: Manitoba bran, \$2½; shorts, \$2½; Ontario bran, \$2½; shorts, \$2½; Manitoba bran, \$2½; shorts, \$2½; Ontario bran, \$2½ to \$2½; shorts, \$2½.

HAY AND STRAW

Prices for hay have dropped somewhat. The supply continues light, but the high price asked caused an equal small demand. Dealers now quote No. 1 hay at \$15.50 to \$16; No. 2, \$13.50 to \$15; No. 3, \$10.50 to \$11; straw, \$2 to \$2½. Retail prices are: No. 1, \$20 to \$23; clover and mixed hay, \$17 to \$19; straw, bundled, \$14 to \$15.

POTATOES AND BEANS

Potatoes held at last week's high level and are hard to get at that. Ontario stock is quoted at \$1.50 a bag in our tone and \$1.70 out of store. Delawares are quoted at \$1.70 and \$1.80. The retail price for Ontario is \$1.90 to \$1.90. Bean prices are steady at \$2.25 to \$2.30 for primes and \$2.35 to \$2.40 for hand picked.

FRUIT AND VEGETABLES

The local market for apples is steady. Quotations are: Greenings, No. 1, \$1.25 a barrel; No. 2, \$1.75; Baldwin's, No. 1, \$1.50; No. 2, \$1.30; cooking varieties, \$2.50 to \$3. Quotations on vegetables are: Onions, \$2.25 per 75 lbs. cabbage, \$2.50 a barrel. On the retail market apples are \$2.50 to \$4.50 a barrel, and cabbage, 50c to 60c a dozen.

EGGS AND POULTRY

The unusual continuance of cold weather has strengthened the egg market again. Receipts have fallen. Wholesale dealers quote 38c to 40c a dozen for strictly new laid; fresh, 30c to 32c. Consumers pay 40c to 50c. At Montreal dealers offer for fresh eggs 45c to 50c; selected, 38c to 40c; No. 1 stock, 35c to 40c. Wholesale quotations for dressed poultry are as follows: Chickens, 12c to 14c a lb.; fowl, 7c to 10c; turkeys, 21c to 22c; ducks, 12c to 14c; geese, 15c to 16c. On the retail market, farmers are selling turkeys, 25c to 35c; ducks, 15c to 20c; geese, 15c to 16c; and chickens, 15c to 18c.

DAIRY PRODUCE

There seems no limit to the price which butter may assume. In spite of the threatened New Zealand importations, this week's market shows a new high record price. Local demand is hard to satisfy. In addition, there have been heavy orders from the Northwest, and there are now offering 34c to 36c for creamery prints; solids, 35c to 36c; dairy prints, 25c to 30c; inferior, 28c to 30c. The retail price is 35c to 37c for butter. There is practically no export cheese in the country. That held for local demand.

AYRSHIRES

AYRSHIRE BULL
Two April, 1911, bulls of choicest breeding and individually, from Record of Performance cow with high records. Also a very fine December, 1911, bull calf from a Record of Performance cow (full sister to "Scottie"). The Champion sire to date of R.O.P. champion R.O.P. cow, Primrose of Tangier. **W. W. BALLANTYNE, Stratford, Ont.**

AYRSHIRES

SUNNYSIDE AYRSHIRES

Imported and home bred, are of the choicest breeding of any type and have been selected for production. THREE young bulls dropped this fall, sired by the well as a few females of various ages, for sale. Write or come and see.
J. W. LOGAN, Mowick Station, Que.
(Phone in house.) 1-4-1

Burn Brae AYRSHIRES

has for sale Two good Bull Calves, 10 months old, from good tested sires, having a few pounds of 4.4 per cent. milk in December. One is a yearling, the other is a 12½ month old. Well marked, nearly all white, dark brown spots.
JOSEPH HUDSON & SON, LYN, ONT.

Ayrshires & Yorkshires

For sale, Ayrshires all ages, including three bulls fit for service, all bred from deep milking stock.
Yorkshires all ages. We are now looking orders for pigs to be shipped in March, April and May.
Apply to Hon. W. Owens, Proprietor, RIVER SIDE FARM, MONTELELO, QUE.
Robert Stinton, Manager

AYRSHIRES AND YORKSHIRES

We have on hand several thirty young bulls of good type and high records. Also proved sires. Prices reasonable if taken soon. Females—Young sows and bums on hand. Write for prices on buying.
ALEX. HUME & CO., - Menie, Ont.
Hoard's Station, G. T. R.

CITY VIEW AYRSHIRES

R. O. P. cows and two-year-old heifers for sale; one yearling bull and a fine lot of 1911 heifers. Prices reasonable. Write or phone.
JAMES BEGG, R. R. No. 1, St. Thomas.

THE SPRINGBANK HERD OF AYRSHIRES

Contain more World's Champion milk and butter producers than any other herd in America. A few choice bull calves from record making dams for sale at reasonable prices. Address
A. S. TURNER & SON, Ryckmans's Corners, Ont.
3 miles south of Hamilton.

HILLCROFT AYRSHIRES

Are Producers
A 9 mos. Old Bull Calf from a Record of Performance cow. Fit to head any herd. Will price right for quick sale.
W. E. TUMMON, CROOKSTON P.O. L. D. Phone.

Ayrshires

World's Champion herd for milk and production. Some young bulls and bull calves, all from R.O.P. cows for sale. A grandson of Woodside of Tangierlyd in the lot. Address
WOODSIDE BROS., Tangierlyd Farm ROTSEAT, ONTARIO

CHOICE AYRSHIRES

Are Bred at "CHERRY BANK"
A few young bull calves for sale. Write for prices.
P. D. McARTHUR, North Georgetown
Hawick Station on G. T. Ry. Que.

Burnside Ayrshires

Winners in the show ring and dairy tests. Animals of both sexes. Imported or Canadian bred, for sale.
Long distance phone in house.
R. R. NESS, HOWICK, QUE.

LAKESIDE AYRSHIRES

We have a number of the young bulls of different ages, all bred by our imported bull and the majority of them from dams sired by a bull who has a record of performance. To make room for the winter we have prepared to offer these at attractive prices.
LAKESIDE FARM, PHILIPSBURG, QUE
Geo. H. MONTGOMERY, Prop.
164 St. James St., Montreal

HOLSTEINS

Summer Hill Holsteins

Present offering of 15 yearling heifers in milk 10 imported...

FOR SALE HOLSTEIN BULLS

Fit For Service, from dams with large records in Record of Performance...

RICHARD CLARKE Henfron, Ont.

Evergreen March

The HOLSTEIN COW that last December completed the Wonderful Record of 26,107.5 lbs. Milk and 1,082.16 lbs. Butter in one year...

MacLean Brothers, SMITHS FALLS, ONT.

Purshed Registered HOLSTEIN CATTLE The Montreal Breeders' Association...

CLOVERLEAF HOLSTEINS, PRESENT OFFERING

One heifer 23 months, bred May 18th, two heifers 23 months, bred Sept. 18th...

AUCTION SALE

The Lakeview Stock Farm will offer for sale at their barn near Bronte, Ont. on Monday, March 25th, 1912...

\$60 Buys a Young Bull Eight Months Old,

a son of the full sister of May Echo, the champion milk and butter cow, for yearly production of Canada...

Maple Grove Stock Farm

Offers a few young cows and heifers (imported and bred) from the famous Gremonia, the richly Ormeby bred bull...

King Youngs Hengerveld, whose 7 breast female ancestors have butter records from 30.0 lbs. to 47.7 lbs. in 7 months...

change hands at 17.50 for twins and 16.12c for large SEEDS Seedsmen are paying \$13 to \$13.50 for red clover...

LIVE STOCK Quality considered, cattle prices are about on a par with other ranges...

AYRSHIRE NEWS Farm and Dairy is the recognized exponent of the Dairy interests of Canadian breeders of Ayrshire cattle...

A SIRE FOR A GREAT HERD Under date of Feb. 1st Mr. John McKeo, Norwalk, writes: "When on my way to New York recently..."

EXPORT BUTTER AND CHEESE Montreal, Saturday, Feb. 3.—The market for produce is a nominal one...

VALUABLE HERD OF CATTLE SOLD Mr. John B. Arnold, of Easton's Corners, has a herd of Holstein cattle...

WM. THORN'S OFFERING

Editor, Farm and Dairy.—My Ayrshires are doing extra well. The cows are milkers and the calves are still nursing...

VALUABLE FARMERS' ACCOUNT BOOK

Farm and Dairy readers should take advantage of the generous offer of the Book...

more Gull Cure people in our advertising columns and write for their free Farmers' Account Book...

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Farm and Dairy readers should take advantage of the generous offer of the Book...

HOLSTEINS

FAIRVIEW FARM HERD

Too much money is spent every year for poor bulls. Why not buy a good one? Sons of Pontiac Korndyke, Raz Apple Korndyke, and Sir Johanna Corbett Glad...

E. H. DOLLAR, Heuvelton, N.Y.

3 YOUNG HOLSTEIN BULLS FOR SALE

One sired by Sir Sadio Cornucopia C/O thilde, whose 3 nearest dams' records average 38.8 lbs. butter in 7 months...

CLEAR SPRING STOCK FARM HOLSTEINS

Special offering of twelve months old bull calves, good thrifty fellows, fit for service and at under \$100 each...

RIVERVIEW HERD

Offer bull calves from 2 to 12 mos. old sired by KING ISABELLE WALKER whose 3 nearest dams and sister average 32.1 lbs. milk in 7 months...

HOLSTEINS

If you are wanting HOLSTEINS, any age, either sex, write me for particulars...

Leslie Farm Holsteins

FOR SALE—Two young bulls fit for service, one from a 21 lb. four-year-old, the other from a 24 lb. cow...

CEDAR VIEW HOLSTEINS

High Class Registered Holsteins All Ages FOR SALE Best Breeding Can Supply a Car Load. Price Right

"LES CHENAUX FARMS"

HOLSTEIN—Winners in the ring and at the pen. Gold Medal herd at Ottawa and London, Ont.

Ourvilla Holstein Herd

Some of the young things that should make good at maturity. Calmity Text, Dekol H.O. sired at 2 years 2 months, 12.5 lbs. milk in 10 months 16 days...

Sold

After all will clean the best milk. 12.50 per bottle delivered. ABSOLUTELY PURE. ALBERTA MILK CO. LTD. CALGARY, ALTA.

OUR FAR

RICHMOND DANVILLE, Jan. 26—Several of the best good dairymen in the county are getting in their drawing logs...

NORTHUMBER

CARLETON, P. much snow in the county, the farmers' Farmers' Institute 27. Hogs are up to 100 and selling at high prices...

BRIGHTON, Jan.

in our neighborhood. Hilton D. H. H. putting one up for about past...

KINGSVILLE, Ont.

Within a mile or more of my place. Just neighbors have also been in the surrounding country...

VICTORIA

HARTLEY, Jan. through Jan. 25th, the cold, going as low as 10. The snow is piled in places almost up to the eaves...

NORFOLK

BOSTON, Jan. 30—silo in my immediate vicinity a very small portion of the silage...

ESSEX

HARROW, Jan. 30 during the past week tobacco are being in season, hay and other feed crops are in prices. Hay is \$29 a ton...

ORILLIA, Jan. 25-

and a half price of the crop on offer. The Orilla Orilla Orilla with two cows would save vicinity. Green corn...

ESSEX

HARROW, Jan. 30 during the past week tobacco are being in season, hay and other feed crops are in prices. Hay is \$29 a ton...

Sold

After all will clean the best milk. 12.50 per bottle delivered. ABSOLUTELY PURE. ALBERTA MILK CO. LTD. CALGARY, ALTA.

OUR FARMERS' CLUB

Correspondence Invited

QUEBEC.

RICHMOND CO., QUE.

DANVILLE, Jan. 30.—The weather has been severe for the past two weeks. We have good sleighing. Farmers are busy with their crops. Most of them are drawing logs, for which they are getting good prices. A few are fattening their old cows and milking and grading. Dressed beef is 6c and 7c to 1c, 8c for extra. Grain feeds are high. Creamery butter, 36c a lb., dairy butter, 35c to 36c.

ONTARIO.

NORTHERLAND CO., ONT.

CASTLETON, Feb. 1.—There is not much snow in the fields; it has drifted about the fences and on the roads. The Farmers' Institute was held here on Jan. 27. Hogs are unsteady in price and farmers are selling below weight. Grain is high.—H. M.

BRIGHTON, Jan. 27.—There is only one silo in our neighborhood—W. J. Montgomery, Hilton P. O.—out of ten farmers. Mr. Montgomery is talking of putting one up. I saw corn and sugar cane for short pasture.—W. T. S.

ONTARIO CO., ONT.

KINSALE, Jan. 30.—There are 15 silos within a mile or mile and a half each way of my place. Just about one-half of my neighbors have silos. Silos are going up in the neighborhood and surrounding country.—W. E. R.

VICTORIA CO., ONT.

HARTLEY, Jan. 30.—The weather through January has been exceptionally cold, going as low as 25 to 30 below zero. The snow is piled up on the roads, some places almost impassable, and lots on the farms. There is good corn for grain and clover. Feed for stock is reasonably plentiful, but the cold weather will make the price of feed advance. The hay is \$15 to \$16 a ton, with good ready straw. Hay is hard to get. Oats are 40c; peas, 41c; barley, 75c to 85c; wheat, 80c to 90c; poultry, \$19 to \$20 a bushel and almost impossible to get them at that price; hogs, 65 to 75c a cwt.; beef, 55 to 65 to 65 to 65 and scarce.

NORFOLK CO., ONT.

BOSTON, Jan. 30.—There are only seven silos in my immediate neighborhood, being in a very small percentage of the farmers. Only one of my neighbors has two silos. The feeding of ensilage in summer is practiced by most of those who have a silo.—E. W.

ERIE VILL., Jan. 27.—Weather conditions are milder, with excellent sleighing. Local buyers are shipping hogs at 65 to 70. Hay is selling at 85 and very scarce. Stock is coming through in good condition. We had a very enthusiastic creamery meeting seven miles from here. A bunch of farmers and their wives attended, and were very much interested in the able address on up-to-date methods of dairying and handling cream.—B. B.

SIMCOE CO.—ONT.

ORILLIA, Jan. 25.—There are within two and a half miles of Orillia 20 silos. Nine silos are in line with the 100-acre farm of Mr. O. S. Orilla North. There are three of them with two silos each (myself included) and five with one silo each in vicinity. Green corn is used considerably.—A. W.

ESSEX CO., ONT.

HARROW, Jan. 30.—Sleighing was good during the past week. Large shipments of tobacco are being made every day. Feed is scarce, hay and straw being shipped by rail and sold lots. Good horticultural prices. Hay is \$29 a ton; oats, 45c; corn, 35c a basket; tobacco, 6c to 12 1/2c a lb.; eggs, 35c; butter, 35c to 36c.—W. A. H.

Seldox See ABSORBINE

These All will clean them off without laying the name of our... ABSORBINE... ALBANY, N.Y.

KENT CO., ONT.

HIGHGATE, Jan. 27.—Wheat was in good shape and winter set in, and fairly good protected with snow so far. Feed is scarce and dear. There are not so many export cars in the last year. There is not so much money in fattening at present prices with shorts at \$25 a ton and corn at 12c. Wood is getting very scarce and high in price. Especially since the gas in Highgate and Highgate from the Tibury gas field has got so low.

CROPS IN THE SOUTH

Washington, D. C., January 30, 1912.—A telegram from the International Institute of Agriculture, Rome, Italy, dated January 29, 1912, received by the United States Department of Agriculture, gives the following information:

"The estimated production of wheat in Argentina, this season is 9,375,000 cwt. (equivalent to 170,560,000 bushels of 60 lbs. each); in New Zealand, 4,940,000 cwt. (or 6,847,000 bushels of 60 lbs. each)."

"The estimated production of wheat in the Southern Hemisphere for this season is 105.5 or 155,000,000 cwt. (equivalent to 1,957,500,000 bushels of 60 lbs. each)."

"The estimated production of oats in Argentina is 17,381,500 cwt. (or 60,833,500 bushels of 32 lbs. each); in New Zealand, 5,342,000 cwt. (or 18,970,000 bushels of 32 lbs. each)."

HOLSTEIN-FRIESIAN NEWS

Farm and Dairy is the official organ of the Canadian Holstein-Friesian Association, all of whose members are readers of this paper. Members of the Association are invited to send their names and addresses to breeders for publication in this column.

BELLEVILLE HOLSTEIN BREEDERS

Enthusiasm and optimism were the outstanding features of the second annual meeting and banquet of the Belleville District Holstein Breeders' Club held at Belleville, January 26-27, 1912. Arrangements were made for the second consignment auction sale that will be held in Belleville April 3. It is expected that between 105 and 200 pure bred Holsteins will be sold. It was decided to present the consignment from sending more than one bull for every three females. It is intended that no bull shall be sold except from Record of Performance and Record of Merit dams. The meeting was attended by some 75 breeders. The strength of the organization and augmented by its future. The meeting was opened by an address of welcome from the Mayor.

Officers Elected

The following were elected: Honorary Pres., B. Mallory, Belleville; Pres., A. D. Foster, Bloomfield; 1st vice pres., G. A. Brethun, Norwood; 2nd vice pres., E. B. Mallory, Frankford; sec. treas., F. E. Mallory, Frankford; executive committee, G. W. Anderson, Rosmore; J. A. Cameron, Madoc; J. C. Wagner, E. L. Leavens, Bloomfield; W. W. Duns, Napier; A. Parks, Napier; R. Honey, Brickley; E. E. Lalefield.

The Banquet

A banquet that surpassed in its appointments and style those usually held by the Canadian Holstein-Friesian Association, was held in the Anglo-American Hotel. An elaborate bill of fare and toast list, printed on high quality paper and interspersed with appropriate and original poetry, was one of the features. The H. Dean, of the Dutch Agricultural College; Mr. McLaue, of the Department of Agriculture, Ottawa; Dr. C. A. Puhob, Kingston; Dr. McCover, Napier; H. B. Cowan, of Farm and Dairy; and the leading members of the club. Over 200 took part in the speech making. The editor of the local paper, and the toastmaster, the speeches were the best he had ever heard at a banquet in Belleville. A paid soloist provided the musical features. Mr. F. E. Mallory proved a capable toastmaster.

THE LAIDLAYS RENAME THEIR FARM

Editor, Farm and Dairy.—We are writing you to explain the change in the name of our farm. It has been known as "Homestead" for some time past. At the annual meeting of the Holstein-Friesian Association last February a motion was passed to rename the farm. We are wanting exclusive right to this name and in registering cattle would need

to register the name with the secretary Messrs. Logan Bros. of Nova Scotia had named their farm "Homestead" some 11 years ago, so they had the prior right to the name, which made it necessary to change ours. Our farm will in future be known as "Orillia Farm."

Notwithstanding our numerous sales, we have still a couple of good bulls left ready for service. One at \$250 from Calumity Teakle DeKof, an extra good two-year-old. She made at 2 years 2 months of age 17 1/2 lbs. of milk in 10 months and 6 days in the Record of Performance. The other is from Belle Drowslip 5th, she bred at 2 years 8 months old and gave 14,088 lbs. milk and 563 lbs. butter in R. of P., was dried less than a month, and as a 3-year-old made 21 1/4 lbs. butter in R. of M.—Edmund Laidlaw & Sons, Agri. West, Ont.

WM. C. STEVENS WILL SELL HIS HOLSTEINS

Just before going to press with the last issue of this issue we received word from Wm. C. Stevens, Phillipsville, Ont. (Leeds Co.), that he wished us to announce his sale of Holstein cattle which are to be sold Feb. 13th, at one o'clock. Mr. Stevens sold only just decided to sell his estate and hence can make but this one announcement. Breeders wanting to get some of his choice offerings at their own price will hear those facts in mind. A pair of colored 3 1/2-year-old heifer which was sold Feb. 13th, at one o'clock. Her dam is a 2-1/2 year old cow. Her sire is a son of 7 days. She was made 19 lbs. of butter in 7 days at 3 yrs. 2 mos. Her dam is a 2-1/2 year old cow. Her sire is a son of 7 days. She was made 19 lbs. of butter in 7 days. Among others of the animals worthy of mention is the sale of Mr. Stevens, Feb. 13, is his great stock bull Pietje Korndyke Lad. He is a son of Pietje 22nd Woodcroft Lad, whose dam is the greatest cow ever imported from Holland, having a record of 31.62 lbs. of butter in 7 days. His dam is Woodcrest Korndyke, one of the greatest daughters of Homestead girl DeKof Saracat Lad, having 22.97 lbs. of butter in 7 days. Her dam Emporia Korndyke DeKof has 25.07 lbs. butter in 7 days.

There are 8 daughters of this bull in the sale and which will be sold by Pieterje Methide DeKof Netherlands has 21.92 lbs. of butter, is a well veined cow with a very large udder. She is also in the sale, with two daughters and one bull (a son).

Her oldest daughter, Brookdale Korndyke Netherlands had 20 lbs. of butter appeared elsewhere this year. She was made in time, has a three-year-old record of 23 lbs. of butter, and is sold by Abbecker Korndyke, one of the very best sons of Pontiac Korndyke.

Another daughter, bred by Mr. Stevens' stock bull, is in calf to A. C. Hardy's \$2,000 "Pontiac" bull.

There is also a son of this cow bred by the stock bull which will be sold. He will do to head the best herd in Canada, as he is a very large, growthy chap, of good type, calved Jan. 4, 1911.

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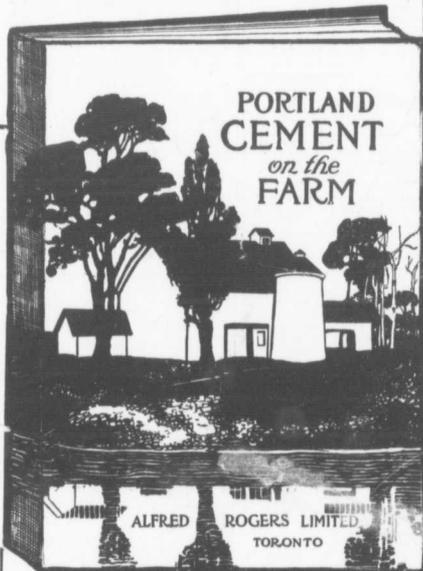
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