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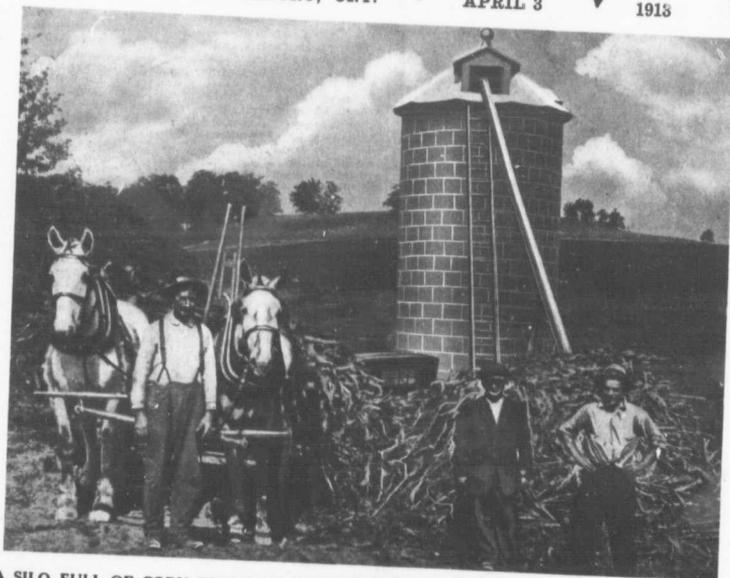
# FARM AND DAIRY

## RURAL HOME

PETERBORO, ONT.

APRIL 3

1913



A SILO FULL OF CORN ENSILAGE IS THE BEST POSSIBLE SAFEGUARD AGAINST LOSS  
FROM SHORT PASTURES NEXT SUMMER

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

See  
Coomes's  
sack  
Dairy and Cold Storage

A SMALL COUNTRY MADE GREAT BY ITS AGRICULTURE\*

Denmark was once the poorest country in Europe per capita, now it is the second richest in the world. Dr. Jas. Robertson tells how the farmers of Denmark wrought the wonderful change.

"WE Canadians have been content to add to our knowledge chiefly by our own experience. Other nations are wiser. They learn much by observation and so they incorporate into their own practice any good things that have been discovered elsewhere. Denmark stands out as an example in this respect. Every farmer in Denmark gets thors out of his experience strength and wisdom for future use, and then he adds to his own knowledge and to that of his neighbor. We have not learned in Canada the meaning of being neighborly. That is a harsh thing to say, but it is a truism I have gleaned from watching ourselves and other people. We are not offensively unneighborly; we do not steal a man's apples nor put our dog after him, but we are a most unneighborly people. The Danes are the most neighborly people I ever knew, and that is why their farming has been so successful.

**DENMARK VS. CANADA**  
 "There are some striking differences between Denmark and Canada, and perhaps for that reason we can never be quite as neighborly as they are. Neighborliness is the secret of all strength and stability and character and prosperity. Denmark has not had half the advance we have in Canada. When I was seven years old she was the poorest country in Europe, without exception. In 1910 she was the richest nation in the world, after England and the United States, and distributed among all the farmers, whereas in England the greater portion of the wealth is in the hands of a few rich people.

"I have traveled all over Denmark and I never saw one poor man. You can picture the size of Denmark by taking all that piece of land that lies south of the St. Lawrence from Beauharnois down to a point south of Quebec city, which represents only a small part of Quebec province. Copenhagen is about the same size as Montreal. Three-fifths of the Danish population (14 millions) live on farms in the country—a large number for a small area. There is a population of 20 for every 100 acres of land. We Canadians have become as thin in our neighborly spirit as we are thinly spread over the country we live in.

**ONE ADVANTAGE WE HAVE**  
 "One of the lamentations of Denmark is that they cannot grow Indian corn. They grow it, but they would make money half as fast again as at present. Their climate is not so cold in winter nor so warm in summer as ours. They grow roots wonderfully well. In 30 years the acreage in roots has increased from 46,000 to 600,000.

"There are a few big farms in Denmark called 'middle holdings,' about 70 acres in extent. The building is in the form of a hollow square, with a large clover yard in the center of an archway for driving through. The small farmer who has seven or 10 acres is called a houseman. He is dominated by the love of beauty, the exaltation of purity and the joy of having a good home."

"The Royal Agricultural Society maintains an expert who examines all implements before a farmer will use them. The yearly yield of milk per cow is from 8,000 to 13,000 lbs.

\*A report of an address by Dr. Robertson at the Annual Convention of the Bedford District Dairy Association in Quebec province, partly in Dr. Robertson's own words and partly according to the reporter of the Sherbrooke Record.

and a good price is realized for their milk.

**HIGH SCHOOLS IN CANADA**  
 "They have high schools for country young people who have left the ordinary schools and been at work for a few years. No one can enter under 17 years of age. There is a five months' winter course for young men and a three months' summer course for young women. They have been so useful that one-fifth of all the young people attend them. The boys and girls before entering these schools have to spend a certain number of years in farm and domestic work respectively. These are residential schools and a distinctive feature is the singing. The study of history, physical culture and singing has made the Danes a happy and contented race.

"They make the place where they live beautiful; we do not know the meaning of the joy of country life like they do,—they have a 'bower of beauty' outside the farmhouses where they spend their evenings. In 1881 their whole exports of butter, bacon and eggs amounted to \$11,500,000—this has been increased to \$2,600,000. In the same period the Canadian exports have only increased from \$1,500,000 to \$26,000,000.

**THEY GET A QUALITY PRICE**  
 "While they increased their exports they got improved their quality that the prices they received from England in excess of any other nation who sent the same quantity, more than half that of the other nations of their people. They cultivated clover, alfalfa, roots, barley, oats, peas, some wheat and large crops of potatoes. Sugar beet factories are increasing and breweries are quickly diminishing. They have good rotations. They grow their own seeds for mangoldia, beets, etc.; they select their own seeds and so get a larger crop. They grow all the bulky feed themselves. They move their cows three times a day and do not fence their pasturing land, thus they get more milk. One-third of their land is very good, two-thirds indifferent. They have very large areas with scrub growth and very poor soil.

"There are 1,250,000 milking cows in Denmark. In 20 years they have increased their exports of butter 169 per cent, nearly all of which is attributed to improvement of the individual cow. The extra care of the single cow is very important. It may be more profitable to have 10 cows and give them the best individual care than to have 25 and not do so.

**REVENUE FROM COWS**  
 "The yearly revenue from the cows of Denmark on small farms is \$120. Seventy thousand persons farm less than 11 acres. There is no dairy commission; the Danish Government does not employ any expert to help the people. The experts are employed by the farmers' organizations known as Agriculture Associations. The chief one has 800 members who pay \$5 per year each. There are 116 Farmers' Associations with 86,000 members. The Agriculture Associations are in charge of the conditions of each locality. If a man discovers a better way of killing weeds or cultivating roots he informs the association.

"There are three kinds of these associations, county, provincial and national. They hold live stock shows, field experiments and farming competitions. There are also 723 small farmers' associations with 98,000 members. Two-thirds of the entire number of (Continued on page 12.)

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Issue Each V

Vol. XX

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Heavy Loss

COOL Can

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## RURAL HOME

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a Year

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FOR WEEK ENDING APRIL 3, 1913.

No. 14

### WE NEED MORE COOL CURING—PROFITS THAT WILL RESULT THEREFROM

#### Heavy Loss due to Lack of Curing Facilities in Cheese Factories—Number of Cool Curing Rooms Increasing too Slowly—A More Rapid Increase Necessary.

**C**OOl curing rooms for cheese are absolutely necessary for all the cheese factories in Canada if we are to get the most out of the cheese industry. The loss due to lack of cool curing facilities in the factories each year is heavy. The loss from shrinkage alone amounts to many thousands of dollars. The loss due to the poor quality of the cheese which are cured in poorly constructed curing rooms, while not so easy to calculate in dollars and cents as is the shrinkage is of even more importance. It has a detrimental effect on our markets and the effect upon the receipts of the patrons ultimately is greater than the loss in shrinkage. Our lack of cool curing facilities and the consequent poor quality of a large portion of our cheese has opened the door wider than anything else to competition in the Old Country markets. Every cheese of poor quality which is put on the market has its influence in reducing the consumption of cheese and in lowering the average price.

At the last meeting of the Eastern Ontario Dairyman's Association, held at Kingston in January, the serious position in which the Canadian cheese making industry is placed through lack of cool curing facilities in factories, was thoroughly discussed, and the following resolution met with the approval of the Association: "This Association is of the opinion that in the interests of the cheese industry of the Dominion of Canada, legislation should be passed preventing the shipment of cheese from place of production under 10 days old."

Nothing is here said about cool curing rooms, but the inference is there. Cheese cannot be kept satisfactorily for 10 days after making without an extra good ordinary curing room, and in very hot weather a cool curing room is almost essential. Did the government act on the suggestion contained in this resolution of the Eastern Ontario dairyman and make the holding of cheese for 10 days compulsory, the immediate effect would be the installation of cool curing rooms in many factories. And this is the only satisfactory manner in which the green cheese evil which threatens to play havoc with our export cheese trade can be remedied.

In order to demonstrate the benefits derived from the cool curing, the Dominion Government some years ago established central cool curing rooms. Cheese from over 100 factories was cured in these plants. It was demonstrated that the saving in shrinkage amounted to one and a half per cent. while the extra quality of the cheese was favorably commented upon by our own exporters and more particularly by British importers, many of whom claimed that if more Canadian cheese was equal to that cured in the central curing rooms, the consumption of cheese in Great Britain would increase enormously.

It is now 10 years since these central cool curing rooms were first established. The good results obtained were made widely known by bulletins, through the agricultural press and from

the platform. But, in spite of the publicity which this work has been given, the establishment of cool curing rooms in our factories is proceeding very slowly. Of the 1,100 or more cheese factories in operation in the province of Ontario only about 60 have cool curing rooms in which the temperature can be controlled. The number is increasing slowly each year but at the present rate it will be many years before they will be common enough to have much effect on the quality of the general output of Canadian cheese.

#### JUST AS ESSENTIAL FOR CHEESE

Good cool curing rooms are just as essential in the cheese factory as is cold storage in the cream-

#### The Greatest Reform Needed

Canadian Cheese Makers are scarcely holding their own. In many cases the products turned out by their New Zealand brethren have brought higher prices on competitive markets. This is not due to lack of skill on the part of the maker, but to lack of facilities for curing his product. Good curing necessitates a cool curing room in every factory. This is easy in large factories owned cooperatively. It should be easy in large factories owned privately by proprietors and patrons get together on the project. But there are many cheese factories so small that the expense involved in building a cool curing room would show but little returns. The demand for well cured cheese, ever becoming more exacting, calls for the elimination of the small factory. The combination of small factories into a fewer number of large ones is the greatest reform needed in many dairy districts.

ery if we are to produce a first-class cheese that will meet the requirements of both our home and foreign markets. The amount of milk received at cheese factories in Canada is many times greater than the milk received at the creameries.

Taking the figures obtained by experiments carried on by the Dairy and Cold Storage Branch as a basis of calculation in a factory making about 70 tons of cheese in a season, the saving would amount to \$200 or \$300 annually on shrinkage alone. In order to make such a great addition to the production of wealth in our country, we should be willing to sanction any reasonable legislation that will enforce or encourage the establishment of cool curing rooms.

#### IMMEDIATE SHIPMENT A MAKESHIFT

At the great majority of the cheese factories, cheese is shipped immediately, being held only a very few days. Where there are no curing rooms in which the temperature can be controlled, it is absolutely necessary that the cheese be shipped quickly for storage in the cool ware-rooms of the buyer. Thus the buyer reaps most of the benefit derived from the saving in shrinkage and improvement in the quality of the cheese.

When the cheese are immediately placed in cold storage by the buyer they cure fairly well. The

kind of the cheese, however, is apt to be soft when cured in boxes and "skin" troubles result. Again, referring to the experiments carried on by the Dairy and Cold Storage Branch, we find that after the first two days in which the cheese are drying out, if not immediately put in a curing room in which a suitable temperature can be maintained, injuries will result which are permanent and cannot be overcome by good curing conditions afterwards. It is evident, therefore, that if we are to obtain the best cheese, the cool curing room must be in connection with the factory. Shipping immediately to large warehouses is only a make-shift at best until we reach the ideal—a cool curing room in every factory.

#### WE CAN'T AFFORD TO WAIT

While cool curing may be expected to come in the natural course of events if we wait long enough,—we will lose too much in the meantime. Canada is an agricultural country and agriculture will continue to be the greatest industry for many years to come. While our home market is ever increasing, it will be many years before it will be sufficient to consume all the products produced on our farms. This is true of cheese as of any other farm product. We cannot afford to lose our foreign market. The only way in which we can hope to keep the position which we now have on the British market is by supplying them with cheese of first quality, and good quality of cheese is equally important in developing our home market as in holding our foreign trade.

Only a few years ago we had comparatively no competition on the British market. Competition has increased of late, however, and it is up to us to see that our predominant position on the British market is not materially affected. New Zealand is our strongest competitor and its shipping more cheese every year. Their shipments increased from 122,000 cases in 1904 to 570,000 cases in the 12 months ending June 30th, 1910. The decrease in exports of Canadian cheese for the same time was almost identically the same. While it may not be true that the importations of New Zealand cheese account wholly for the decrease in exports of Canadian cheese, the figures given show the way in which affairs are trending.

#### NEW ZEALAND CHEESE—COOL CURED

Should the shipments of New Zealand cheese continue to increase in the future as they have in the past, the time will soon be here when we will have to fight harder for our position on the British market. Owing to climatic conditions in New Zealand and on the voyage over, practically all of New Zealand cheese is cool cured. Therefore before competition becomes too keen, it is necessary that our cheese be well cured and of first quality if we are to hold our position. We cannot afford therefore to wait for the establishment of cool curing as we have been doing. If we are awake to our own interests we will start immediately to see that a properly equipped cool curing room is installed in the factory to which we send our milk.

Considering the profit to be derived from the cool curing room in connection with the factory, it may seem strange to those not acquainted with conditions in the cheese industry that such curing rooms have not already been established

(Concluded on page 17.)

## A Long Look Ahead

L. K. Shaw, Welland Co., Ont.

If we farmers could see as far ahead on the selling question as can our politicians on problems that affect them, these makers would not be complaining of great shortages of milk in July and August. Just to illustrate: A few years ago, Sir Wilfrid Laurier was called on in reply to a toast at a great banquet in New York. He had no previous warning, but he gave a splendid address just the same. On being congratulated on the worth of his address, Sir Wilfrid answered, "Oh, that speech was prepared 20 years ago, and I never had an opportunity of delivering it till today." How is that for looking ahead? And yet we farmers cannot think four months in advance and prepare for the short pastures that have always played such havoc with our milk cheeses.

We make great preparations for winter feeding. We erect splendid barns. We work hard all summer to ensure that those barns shall be filled with hay and grain in order that our animals may not suffer during the cold winter. As a matter of fact, many herds in my own neighborhood suffer more during the summer months when food should be abundant than they do in the winter when none is being produced. A little foresight now would entirely eliminate that inconsistent and unsatisfactory condition of affairs.

### SUMMER SILO TAKES FIRST PLACE

We regard the summer silo as the very best method of preparing for summer feeding. We ourselves have not a summer silo, but we have a very large winter silo and there is usually enough left over to carry us safely through the driest weeks of summer. It is only recently, however, that we have been feeding silage in summer, and a few suggestions of our methods of preparing for summer soiling before silage was available may be of value to those who have no silage for summer feeding.

Our staple feeding mixture was peas, oats, and vetches; half a bushel of peas, five pecks of oats, and a few pounds of vetches. Green oats alone make a fairly satisfactory mixture, but it is a "mean" crop to handle. We made our first seeding along with our grain crops and additional seedings every two or three weeks right up to the first of July. These later seedings, of course, were timed somewhat according to the rainfall, although if the land is kept thoroughly tilled up to that time there will be plenty of moisture in the soil to give the soiling a good start.

In calculating the number of acres of soiling crop that we will need we go on the supposition that an acre of the mixture we have mentioned is worth as much for soiling purposes as two and one-half acres of pasture; usually about six or seven acres for a herd of 10 to 12 milk cows. This is fairly heavy soiling, but we do not like to trust too much to pastures, and if the season is favorable and all of the soiling crop may not be used, it makes splendid hay or can be threshed for grain.

### AN ARRANGEMENT FOR CONVENIENCE

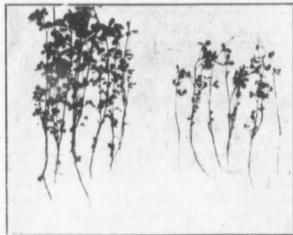
A small point, but one that will save a lot of work and worry later on, is to have the soiling crop as near to the barn as is possible. If our grain crop was nearer the barn than the corn crop, we would have the soiling crop along the near side of the grain field. If on the other hand the corn crop occupied the nearest field we would devote that field to soiling. For late summer and fall feeding we always had green fodder corn.

Some of the advantages that we have found in soiling are: This system reduces the amount of land required for pasture. It keeps up the flow of milk through the entire year. We are enabled to keep the cows in better condition

than on pasture alone; and we find that where it is gone about in a businesslike manner and regular times apportioned for bringing in the green feed, that it is not very expensive. Now is the time to get ready for the summer soiling.

## Brief and to the Point

One and one-half pints of water in which are the legume bacteria will inoculate a bushel of alfalfa seed. This amount of water does not



Culture or No Culture

Both these groups of alfalfa plants are from the same field. Those to the left are the larger plants from the part of the field that was inoculated with legume bacteria. The plants to the right are the largest plants from the portion of the field not inoculated. Does it pay to inoculate alfalfa seed?  
—Photo, courtesy J. Laughland.

make the seed very moist and dries rapidly. In fact, the seed may be ready to sow in 10 minutes.—Prof. F. S. Edwards, O. A. C., Guelph.

My practice is to separate any ewes that are old and not as strong as the majority of the flock and place them with the ewe lambs and feed them better than the others. Some who claim to be authorities state that it is injurious to feed rots to ewes in lamb. However, after my sheep are housed for the winter I feed them pea straw, clover chaff, and betwee three and four pounds of pulped turnips daily with salt and water whenever desired. I think it a great mis-



Quite Proud of their Premium Pig

These three prospective farmers are Tom, Noel and Graydon, the three sons of Mr. Graydon Knowles, Hastings Co., Ont. Graydon, only 10 years old, seen in the centre, won this pure-bred Tamworth pig for securing subscriptions to Farm and Dairy.

take to deprive sheep of water.—T. Baker, Durham Co., Ont.

Ninety-five per cent. of the bacteria on alfalfa seed are killed if the seed is allowed to become dry. Hence the necessity of sowing the seed as soon after spraying as possible.—Prof. F. S. Edwards, O. A. C., Guelph, Ont.

I have seen a field that has produced a crop of feed every year for 11 years. I have been in two alfalfa fields 22 or 23 years old, and cropped every year since started. There are lots of fields in the alfalfa growing section of Ontario that are 23 years old.—Prof. F. S. Edwards, O. A. C., Guelph.

## My Crop Rotation

Wm. Jull, Oxford Co., Ont.

In devising a crop rotation the most difficult part is not the learning of when, where, and how to do things, but rather the actual doing of them. It is very difficult for the average farmer to do everything at the right time and in the right way according to his best knowledge. We practice a four-year rotation. I have found that the shorter the rotation the greater the net profit. The long rotation is the rotation that improverishes the farm; the short rotation, with good cultivation, enriches the farm and keeps it clean.

We grow grain only one year at a time. We seed down on the grain, and the next year take off the hay. The year following we have it for pasture. We try to have a field pastured only one year. The next year this field is plowed early in the spring and planted with corn or a hoe crop. Through the winter we draw out the manure and put it in large piles, and then in the spring, with the manure spreader spread it on the pasture field. We plow just deep enough to get a good seed bed—about five inches. We do not like to plow the manure too deeply for corn. We use a two-furrowed riding plow with four horses, and the operation is done quickly, and as soon after the seeding as possible. We harrow and roll as fast as the land is plowed to conserve the moisture. Then we work the ground well and plant the corn about May 24th. We keep it well worked all summer. In the fall soon after the corn is in the silo we plow again about an inch and a half deeper than we did in the spring.

### SPRING CULTIVATION

As soon as the ground is dry enough to work in the spring, we go on with a cultivator first and cultivate it deep, and then we cross cultivate, then harrow, and roll until we have a fine solid seed bed which we sow with oats or oats and barley mixed. We seed down with clover and timothy mixed, about 12 lbs. to the acre. We generally sow about one and one-half bushels of oats to the acre and about two bushels of oats and barley mixed. We mow this field the next year, and the year following we pasture until about the middle of July. Then we try to plow part or all of the field and summer fallow it the rest of the year; this we consider the best time to kill all kinds of weeds. We summer fallow by plowing three times; the first time quite shallow, and work it down well; then plow again after the weeds begin to grow, and then the last time in the fall very deep. We have this next year for roots and corn or grain, whichever it is needed for.

### PRACTICE WITH FALL WHEAT

We do not raise very much wheat. When we do our practice is to plow a sod that has just been mowed, and get it ready for wheat. We top-dress before we sow the wheat. As soon as the wheat is off we plow the field and sow with rape for fall pasture for the young cattle. Rape makes a lot of pasture and helps the land. We plow again in the fall and sow with barley in the spring and seed down with clover and timothy.

We have about eight acres seeded to alfalfa, and with this and a silo for summer feed, we are able to get along without so much ground to pasture, and will give us a better chance to summer fallow after haying.

To this practice we attribute our success in improving our farm. By practicing a short rotation and giving the farm more work it keeps the moisture in the ground, so that when there is a dry year or a drought the crops are not affected so badly by it.

...Almost of studying own farm,



JAS. LAUP

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**Alfalfa in Simcoe in 1912***J. Laughland, B.S.A., Simcoe Co., Ont.*

Almost every farmer has had an opportunity of studying this wonderful crop—alfalfa—on his own farm, and yet the varying degrees of success that farmers have attained in attempting to grow alfalfa show that there is still need for greater knowledge on the subject. Observations throughout the county of Simcoe during the past year have led to the publishing of this short article, which may be of interest to farmers all over Ontario who will be starting to grow alfalfa next year.

**Jas. Laughland**

**STRAIN OF SEED.** The source of seed is one of the most important factors in obtaining a good stand of alfalfa. In many cases where fields have been almost ideal and when the season has been a good one, with regard to drainage and cultivation. I find that attempts to grow alfalfa have met with complete failure. Experiments conducted at the Ontario Agricultural College and on individual farms throughout the province, indicate that seed from certain sources will produce a stand of plants that no winter will destroy, while seed from other sources will not produce a crop that will live through the most favorable winter. Those who start to grow alfalfa for the first time should obtain the best northern grown seed that they can get, and as soon as possible I believe people should save seed from home-grown alfalfa to sow subsequent fields.

I have observed that almost any soil that is well drained and fairly rich will grow a good crop of alfalfa. The best crops I have seen in this locality, however, have been grown on rolling land. This is probably due to the fact that such land had better underdrainage than flat fields on which attempts were made to grow a crop. The soil should be thoroughly prepared before seeding. Special care should be taken to see that all kinds of grass have been thoroughly eradicated.

**TREATMENT OF SEED**

There is one thing sure, a certain small organism must be present in the soil before alfalfa will grow for more than one year on that land. This organism is usually applied to land intended for alfalfa by putting on each acre of that land about 200 pounds of top of soil off a field where alfalfa has been grown or it may be applied to the seed in culture. Sometimes these bacteria become established in alfalfa fields without having been purposely applied, but it is cheap assurance to either apply the culture to the seed or to put on a dressing of soil. The accompanying illustration shows six of the largest plants from a portion of a field belonging to Mr. Clark, Collingwood, and six of the largest plants from another portion of the same field. In the first case culture supplied by the Bacteriological Department of the Ontario Agricultural College was applied to the seed, and in the second case no culture was added.

I find that from 15 to 20 pounds of seed to the acre gives the best results. In some cases sowing with a bushel of barley as a nurse crop has been very successful, in other cases best results have been obtained by sowing alfalfa alone. A good deal depends on the season. In a wet season the alfalfa sown with a nurse crop seems to give best results, as there is always sufficient moisture to promote the growth of both crops and the grain protects the little alfalfa plants from the hot sun.

Last year some of the early sown fields grew

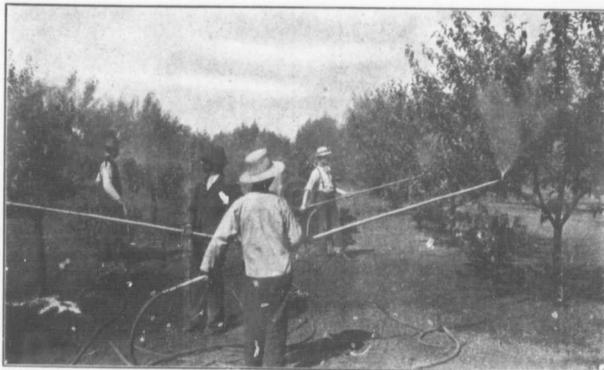
to such an extent that the crop had to be cut in order not to have too much top for the winter. In no case should it be pastured for the first season.

Alfalfa is a crop that has a very important place on every farm, although it will not replace red clover, because it cannot be worked into a short rotation. There is a place, however, on almost every farm where a few acres of alfalfa can be grown quite successfully, and this along with corn will enable the farmers of Ontario to keep more stock which will help them to enrich the land, and instead of getting 15 bushels of wheat an acre, they will be able to get 40. The same will hold good with almost all other crops; while there are some farms that are producing maximum crops, there are many that are only producing one-half of the quantity that might be raised if the land were made richer and better worked.

**Lessons from Pure Bred Stock***R. B. Ness, Chateaugay Co., Que.*

One is instilled, from the moment the first registered animal enters his herd, with an interest and ambition to forge on to a much higher sphere of usefulness as a farmer, dairyman or citizen of the community in which he resides. With the installing of the registered stock, which of course costs more money than scrubs or grades, one feels that to get that money returned he must apply more energy, study, and interest, which of course broadens one's ideas and very materially assists in developing both the herd and the owner's usefulness; in many cases to a greater extent than dollars and cents. Such has been my experience.

I have found that one is likely to begin by better feeding, by taking more care in the handling of the stock, making improvements in stabling

**Is the Eastern Fruit Grower Prepared to Give His Orchard Such Attention as This?**

It is not many years since British Columbia fruit growers began to compete with those of Eastern Canada for the markets of the prairie provinces. Western fruit on prairie markets has now a firm standing and Eastern growers will get a hint of why they are not more successful in competition with their Western brethren. Good orchard methods, combined with expert packing, explain the success of British Columbia apples.

—Cut courtesy B. C. Department of Agriculture.

**Against Early Breeding***D. A. MacFarlane, Huntingdon Co., Que.*

Prof. Barton struck the right note in *Farm and Dairy*, Dec. 5th, when he solemnly warned all breeders of dairy cattle against the dangerous and growing practice of having heifers freshen for the first time when they are little more than calves. I do not believe in having a cow come in until she is three years old. I would go further. I believe if you have a cow come in at four years old that she will give as much milk by the time she is 10 years old as a cow bred to calve earlier. This early breeding is bound to result in small, undeveloped cows. I have heard breeders who are following this undesirable practice say that good feeding after the heifer comes in will enable her to regain her size. You can't do it, and in no herd have I seen these early bred heifers make the big strong cows they otherwise would have done.

I made mention of cows calving for the first time at four years old. I had two that came in at that age, and they were grand milkers. Also they were of great size. They did not get coarse either. Coarseness is due, I believe, to the wrong kind of ancestry.

It doesn't cost much for the breeder to test the desirability of the two systems for himself, and then he will know for sure.

and surroundings—such as a few more windows, more roomy stables, a ventilating system, a water system in the stables, and numerous other comforts and conveniences which were not thought of before. Again, I have found that one will take greater interest in growing more suitable feeds; in a better cultivation of the soil, which means an increase in all branches.

My pure bred cows and their offspring do their part in swelling both the bank account and the owner's store of knowledge. Not the least important of the developments is, in my mind, the training which a young growing family of boys and girls, who are the backbone of our great Dominion, gets. There is no calling which compares with that of the farmer, in the up-bringing and development of our young people.

I have learned that cows that have been well kept pay big returns. While there is a great deal in the breeding, the best breed is little better than a scrub if not well fed and cared for.—D. F. Armstrong, Leeds Co., Ont.

I believe lambs should be weaned before the first of September. In this way ewes, if on suitable pasture, will have a chance to recover from the exhausting duty of rearing lambs through hot weather and oftentimes a lack of pasture. They should be in good, vigorous condition at time of mating and when they go into winter quarters.—T. Baker, Durham Co., Ont.

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FARM MANAGEMENT

Manure for Potato Land

We have a field of six acres sandy loam on which we have grown corn for two years, applying manure each year. Next season we intend to have the same land in potatoes. Is it necessary to apply manure again?—E. G. Montreal.

We should suppose that land that has received two fairly liberal applications of manure on two successive years would be in good condition if it was of fair fertility to start with. E. G. will know better the condition of his soil than we do. It is probable, however, that a small application of commercial fertilizers, say 150 lbs. nitrate of soda, 400 lbs. acid phosphate and 200 lbs. sulphate of potash, would be more advisable this year as some believe that too heavy applications of manure do not produce a quality crop of potatoes.

For a Kicking Heifer

I have a two-year-old heifer just freshened that is giving us a great deal of trouble. Due to her kicking it has been almost impossible to milk her. How may the trouble be remedied?—J. McG., Northumberland Co., Ont.

Several reasons might contribute to make a docile heifer an ugly tempered milking cow. It may be that the heifer's udder is still sore, in which case an application of sweet oil and much hand rubbing would be advisable. If the teats are sore she would need to be milked very carefully and the scabs softened with vaseline.

Some heifers, however, will kick where there is no apparent reason. In such a case, a trunk strap encircling the body just in front of the hook bones and drawn very tightly will make it necessary for the heifer to behave herself. Tying the hind legs together is also effective. The heifer may throw herself a few times, but that, too, will teach her to behave.

Care of Ewes after Lambing

By R. C. Curtis.

At the approach of the lambing season it is a good plan to examine the condition of the ewes to see that they are thrifty and to determine if their udders are in good condition. The small locks of wool should be trimmed away from the teats to avoid hair balls which sometimes form from these locks in the stomach of the lambs. After the lambs show their ability to find the teats without aid the success of raising them is well in progress. For a time after birth they should be confined with the mother in a small pen to prevent them from getting lost in the flock. After a few days, however, they can be turned in the lots or pasture with the flock.

For a day or so after lambing the ewe will need little to eat except some pure water and bright clean hay. As the lamb develops and grows stronger the mother may be fed a light concentrated ration. Wheat bran is excellent for this purpose and somewhat later some crushed corn, oil meal, linseed meal or cottonseed meal may be added. For the ordinary sized ewe a pound a day and for very large ewes from a pound and one-half to two pounds of grain a day is ample for a large milk flow. If this is supplemented liberally with pasturage or silage the quantity may be reduced.

When the lambs are weaned the udders of the ewes should be looked after carefully until the milk flow is turned on pasture, and there gain the larger part of their livelihood until breeding time in the fall.

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### Raising Hogs Cheaply

By W. R. Lanson

In raising hogs cheaply it is necessary to begin with the sows. They must be fed well in order to produce a good litter of strong vigorous pigs. Oats make a splendid grain feed. It is a well-balanced food. Corn is not suitable. It is too fattening. Also provide plenty of pure water. Exercise is necessary. This can be provided by feeding the oats on a feeding floor, scattering them thinly. It is not necessary to grind the oats. The sows should be handled so one can go up to them at any time.

A good time to have them farrow is about April 1st. A good place is a stall in the horse or cow barn. The time of farrowing can be determined quite exactly. The milk comes into the teats four to six hours before farrowing. Dont feed the sow for 24 hours after farrowing, but give her slightly warmed water. Then feed some feed like oats and some shorts. When the little pigs are three or six weeks old begin feeding them some grain feed like ground oats. A good way is to fence off their trough so the sow can't get it. Wean the pigs when about 12 weeks old.

### MAKE PORK ON PASTURE

A good pasture should be provided. For early spring a ryegrass pasture is fine. This can be followed by a mixed pasture as follows: Peas, two bushels per acre; barley, one bushel, and rape, three to four pounds. Some grain should be fed as the pasture alone will not be sufficient. Then plant a patch of squaw corn. The pigs can be turned into this the middle of August. The sows that are to be used for breeding should not be turned into the corn but keep them on the pasture and feed some grain as oats or shorts. This requires the minimum of labor and makes cheap pork.

An expensive hog house is not necessary. A straw shed will answer very well. Set up some posts in a circle with an alley leading to the east, put woven wire fences on the posts and some poles on top. Throw the straw over it when threshing. The A-shaped cuts are fine for the sows after they have farrowed.

### Items of Interest

Fifty milk producers met in the Labor Temple, Toronto, March 22nd. It was decided to ask \$1.30 an eight-gallon can from wholesalers during the summer. The prevailing price last summer was \$1.27, and the winter price now prevailing is \$1.62.

Nova Scotia farmers will do well to avail themselves of the opportunity of securing the annual report of the Secretary of Agriculture. Following the plan instituted by Professor Cumming some years ago, all of the articles deal with some phase of farming—swine breeding. Included in the articles are descriptions of the various breeds of swine, methods of feeding, care in breeding, etc. Copies may be had on application to M. Cumming, Secretary of Agriculture, Truro, N. S.

The Live Stock Branch of the Dominion Department of Agriculture are in receipt of numerous applications to where it is possible to raise either Angora or milk goats. Any who have a surplus stock would do well to write to the Live Stock Commissioner giving him information as to the number of goats kept, the usual number for sale each year, the prices asked, and if possible, a brief statement regarding expenses found necessary and returns which may be expected from one engaged in this class of stock raising.

Examine the hogs for lice and treat with a good animal dip.

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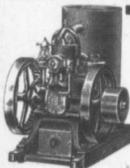
Standard Hand Separator Oil is the perfect lubricant for cream separators. Reduces friction and jarring to a minimum, so that greatest cream yield is insured.

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## Veterinary Notes

By Dr. M. H. Reynolds

Joint ail in colts and calves is simply an inflammation of joint structure due to a germ infection which gains entrance through the raw navel cord at the time of birth or very soon after.

When treating cattle or other domestic animals for lice, bear in mind that it is just as necessary to clean up and disinfect the stables, as to treat the affected animals.

For lice on cattle, in cold weather dust Persian insect powder over the backs and rumps; or brush the necks and backs daily using a little kerosene on a stick brush—not enough kerosene to wet the hair or injure the skin.

There is an unnecessary prejudice against lumpy-jaw cattle. A considerable percentage of these cases are passed by government inspectors as fit for food purposes. Only the very bad cases, especially those where the disease affects several organs or parts of the body, are condemned.

For worms or other parasites living free in the stomach or intestines, apparently careful experimental work has shown good results by the use of low grade tobacco leaves sometimes called "Tobacco trash." This should be chopped up fine; mixed with an equal amount of salt and kept constantly before the sheep.

The large swelling that occasionally appears in front of the knees of cattle, particularly old cows, is properly known as hygroma. It is usually filled with a watery or straw-colored fluid. Opening or other surgical operation is inadvisable except by a competent veterinarian. These swellings usually do no harm and most of the cases are most wisely left alone.

For ringworm on calves or other domestic animals common at this season of the year, give a good scrubbing with stiff brush, soap and water; then apply tincture of iodine and glacial acetic acid in equal parts. Use a small brush for the medicine and be careful, especially when working near the eyes. Apply twice a day for the first two days and then once daily.

Cough among the hogs may be due to very dusty quarters. With young hogs it is frequently due to minute thread-like worms in the bronchial tubes. A soft, hacking cough is a very common symptom of hog cholera. Hogs also have the common forms of bronchitis and pneumonia, just like other animals, and people. With hogs, coughs and lung troubles, aside from cholera are frequently due to sleeping in warm quarters, possibly piled up, and then going out into cold places to feed.

Infectious abortion among cattle has become one of the most serious problems for cattle owners so far as infectious diseases are concerned. It is well entitled to rank in importance with tuberculosis. Two new medical treatments have recently appeared, either one of which may possibly prove to be of very great importance. One abortion, is used like tuberculin, as a diagnostic; and the other is a vaccine, which it is hoped will immunize heifers against the infectious. There is not sufficient reliable information available as yet, upon which to justify any definite statement. Breeders should keep these things in mind and watch for future development.

Light and sunshine supplemented by ample ventilation are things that should not be neglected in planning the new cow stable. And how often they are.

Keep your eye on the man who doesn't stop to get the strippings. The last milk from the cow is the richest and hence the most valuable.

## Calves Without Milk

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**POULTRY YARD**

**Facts About Geese**

*Enos, L. McNeill, Victoria Co., Ont.*  
 Geese must be kept on grass and water from early spring until late in the fall. The only time we need to feed grain is in the winter and very little is needed then. To keep geese in good breeding condition we find that sweet corn and a little hot chop is a very cheap feed for winter. Expensive houses are not required for their shelter.

We never think of mating more than two geese with one gander. Females are good for breeding purposes for 10 or 12 years. A gander should not be kept longer than four years. We would advise early breeding stock in the fall so early winter so that the birds will become acquainted with each other; also their new home.

**IN THE BREEDING SEASON**  
 As a rule the geese begin laying in March or April. We gather the eggs as soon as laid to prevent their being chilled. After the geese have laid her setting of eggs, see that there is lots of good clean straw in her pen with which she may make her nest. We would advise putting a green sod for the bottom of her nest as this sod retains moisture.

When the geese has been setting for three weeks watch for a chance when the geese is off feeding, get a pail of luke-warm water and dip each egg in its turn in the water. This will help to soften the shell so the goslings can break the shell more easily.

**EARLY FEEDING**  
 After the goslings are hatched we take them and the mother geese to a nice green plot of grass and feed them a little stale bread soaked in milk for the first two or three days. When they are a week old they ought to be strong enough to go with the old geese and take care of themselves as they care very little for feed of this kind after that age.

We consider the Embden or Toulouse geese the most profitable kinds to keep. They should be kept pure, not crossed or mixed. Pure bred birds can be sold for twice, or perhaps three times the money for breeding stock that would be realized on cross bred birds for market purposes. The Toulouse geese may lay more eggs than the Embden, but the Embdens make the best mothers.

**Killing and Dressing Market Poultry\***

*Miss Mary Yates, Ontario Co., Ont.*  
 There are two usual methods of killing fowl and both are good,—one for private use and the other for the commercial trade. There is a great deal of badly killed poultry put on the markets of this province and a few suggestions as to how to do it better may not be out of place.

We can never expect to please the most fastidious or secure the highest prices on the market until we pay more attention to one of the simplest of details,—we must starve the birds 24 hours before killing. How often we see birds placed on the market with their crop full of food and their bodies full of gases, which spoil the flavor of the flesh, discolor it and ultimately lead to quick decay. Buyers tell us that they would be able to offer better prices if birds were fasted. Prices are brought down to all because of the neglect of this simplest detail.

Poultry men and poultry women have said to me "But the fed bird

\*Summary of an address at the Ottawa Winter Fair, 1913.

weighs heavier." What a humiliating confession! Doesn't simple straightening require a lot of drumming home. Others than I have removed the food from the crop after the bird is dead. This is not sufficient. If the crop is full it indicates that the alimentary tract is full of food, that the blood is laden with food, and this will stay decay.

When plucking the birds in the fattening crate I would advise dusting with insect powder if they require it at all.

**DISLOCATING THE NECK**  
 Now for some practical suggestions: In killing the bird by dislocating the neck, stand firmly on the left foot holding the bird tight in the left hand with the back uppermost. Take the head between the two first fingers and snap back and down and start to pluck immediately. The struggling that will follow is due to a nervous contraction of the neck muscles.

Pick straight down the back and remove neck feathers. Then pick the wings and the breast may be plucked last of all. Dry picking is the only way to pluck either for market or for home use. After the bird is plucked it is a common practice with some to immerse in cold water. This too is a bad practice in that it affects flavor and keeps the bird from drying.

When the bird is to be placed on the market, killing is best done by stars and bleeding in the mouth or neck. Dislocation of the neck leaves a clot of blood collected inside the skin of the neck and even if this is removed there is bound to be a certain discoloration which will not be pleasing to the buyer. Special knives can be secured for this purpose and with a little study of the anatomy of the head and some practice one will soon become expert at this method of killing. Introduce the knife over the tongue, cut across at the back of the throat on a level with the base of the skull. One cut will sever both veins. Reverse the knife and cut up through the brain. The expert killer will strike the right point in the brain every time but the amateur had better move the knife around somewhat to reduce the brain to a pulp. The ease of plucking depends on the success of this operation as the nerve centres that control the muscles holding in the feathers are located in that part of the brain.

**ADDITIONAL PRACTICAL SUGGESTIONS**  
 When killing in this manner the bird must be suspended by its feet. A very good plan is to have the bird itself in a burly sack, its head coming through a hole at the bottom. The struggling is then controlled and the feathers are not covered with blood, making plucking a much more agreeable job. I prefer to buy a bird that has the head off. Disease is generally indicated in the head and if we have good poultry it is our advantage to leave it on.

Shaping and cooling should be done under pressure or by boards or strings, be secured either by boards or strings. The object of the pressure is to expel gases from the body which destroy flavor and hasten decay. If we would have a No. 1 bird, however, we must be very careful not to bruise in pressing.

Shaping with strings is a desirable method and one that is growing in popularity. First tie the feet down behind the shoulders, tie the strings down to the tail, tie the strings to the toes by a slipknot and pull tight. Run a string through both hooks and over the back and then over the tail. Hold and pull very firmly before tying. A loop may be left here by which to hang the bird up. The bird may then drain as long as necessary. If there is any blood left in the neck when placed in cold storage, it will gradually creep up and discolor the flesh on the breast.

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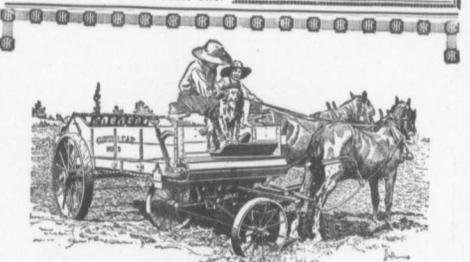
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**HORTICULTURE**

**Seasonable Orchard Talk**

Seasonable advice on the prevention of sun-scald and the cure of oyster shell bark louse is contained in a circular letter that J. F. Metcalf, B.S.A., District Representative on Manitoulin Island, recently sent to his constituents. The following is an extract from that letter:



**This Head is Too High**

"It is quite possible that there may not be any sun-scald this spring, but prevention is always better than cure, and in this case there is no cure. Sun-scald is caused by getting a few very warm days early in the spring, such as you had last March. The sap is started by the heat of the sun and then cold weather sets in and it freezes. Most of your trees will stand lots of cold, but will not stand the combination of heat and cold. The injury usually happens on the south or south-western side of the tree.

"Sun-scald may be prevented by protecting the trunk and crotch of the tree from the rays of the sun. This is where the most injury takes place, because of the reflection of the sun's rays from the snow. You might enclose the trunks and crotches with corn stalks, building paper or shading by nailing two boards together in a V shape and placing upright on the south side of each tree. Whitewashing is very effective since the white color reflects the rays of the sun instead of absorbing them. Even wrapping by tying a newspaper around the crotch of the tree will be a good move, but never use tar paper or anything black as the color only makes matters worse.

**OYSTER SHELL SCALE**

"Are your trees troubled with the oyster shell scale or bark louse? This pest can be controlled by the use of lime-sulphur put on in the form of a fine spray. Last year I demonstrated the use of this material on a number of orchards on the Island, but the treatment must be continued from year to year to be effective, and I can hardly be expected to spray all the orchards on the Island with one spray outfit. Would it not be a good plan (if you have not got a spray outfit already) to join with one or more of your neighbors and buy one? In that way you could have a very good outfit at small expense. The small, cheap

outfits that you might be tempted to buy if buying alone are as a rule very little better than none at all, since they do not have sufficient force to put on the spray in the form of a fine mist — which is very essential. The spraying should be done before the buds burst, and it is none too soon to get a spray outfit ordered for the coming season."

**Trees Injured by Mice**

Considerable damage has been done to fruit trees during the past winter by mice. If attended to at once the injury can be much lessened. Where the injury is slight or even if the outer bark is all eaten off, if there are strips of the inside bark still left, cover with grafting wax and bank up where possible with earth to keep the bark moist and to prevent drying. The hot sun will soon destroy the life of the under bark. Where these shreds of live bark are near together, this will be all that is necessary to be done.

Where the bark is entirely eaten off, girdling the tree, paint the wood thoroughly with a good lead and oil point, and as soon as the sap begins to run, cut scions and carefully insert them in the live bark at top and bottom, waxing thoroughly and tying firmly. A scion should be put in about every two or three inches around the damaged part. In such cases it is wise to cut back the top severely, as the evaporation from the top will be greater than the capacity of the scions to carry the moisture from the earth. In this way valuable trees can be saved that otherwise would be a total loss.

Nothing has done more good to the Niagara fruit district than the introduction of the San Jose scale. It



**A Tree Headed as it Should be**

The two illustrations on this page depict two methods of heading fruit trees. Growers are coming more and more to favor the low heading method, as through it the cost of operating the orchard is reduced all round. Eighteen inches is as much trunk as any tree needs.

made fruit growers spray.—F. G. Patterson, Grimsby, Ont.

The President of the Wentworth Fruit Growers' Association last year made \$1,700 from five acres of apples, and last year was supposed to be a poor year too.—F. G. Patterson, Grimsby, Ont.



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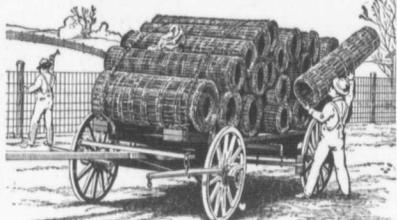
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removed. Try for yourself some day the difference in breaking strain between an IHC wagon axle and a piece of kiln-dried wood a third larger. Then you will know why we can hardly keep up with orders. The IHC local agent knows which wagon is best suited to your work, and will give you catalogues and full information about the wagon he sells. See him, or, if you prefer, write

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## A Small Country Made Great by its Agriculture

(Continued from page 3)

holders belong to one of these associations. They have 1,885 live stock associations. No wonder they have improved their cows, their pigs, their horses and their sheep! The farmers run their immense bacon business themselves. There are 500 associations for special purpose of keeping cow records; 21 creamery associations and 24 butter-makers' associations. There are 1,260 cooperative societies for buying seeds, manures and implements.

### GOOD ROADS IN DENMARK

"There are good roads in Denmark. Everyone uses a bicycle, which only costs \$25 and lasts 10 years. In the country schools half the floor space is occupied by a gymnasium, and the high schools produce 'wealth in the man as well as wealth controlled by the man'. The high schools charge the eight dollars a month, including board and instruction and the State grants scholarships by which a boy only has to pay one-third of the cost. One hundred and fifty thousand people in rural districts have attended these schools of which there are 80. Could not something like that be done in Canada? There are other schools founded and supported by the farmers themselves to which the State gives a subsidy.

"They send their live stock nearly all over Europe and South America. They buy concentrates that not merely feed the cattle but also enrich the land. They make the land rich by growing coarse grains, clover and alfalfa. In this part of Canada you would find it profitable to grow all the corn you can for ensilage.

"Danes are rich, clean, have good physiques and make good use of their education. The girls are taught housekeeping, cooking, dairying, gardening and poultry culture. The boys are taught carpentry, blacksmithing and weaving. The Danish motto is, 'Wisdom, Work and Happiness.'"

### What Constitutes Good Feed?

The chemical analysis of a food stuff is one of the first things that must be considered in determining whether or not it will be of value for feeding to dairy cows. Speaking of this point at a recent convention, J. G. Taggart, B. S. A., district representative in Frontenac Co., Ont., compared the two feeds, corn and peas.

"Grind up these two feeds," said Mr. Taggart, "and they seem to be about the same weight. They feed about the same and they look similar. Feed them and the results are entirely different. The peas, we will find, lead to a great development of bone and muscle, while the corn fed animal does not develop a good frame and the animal will be stunted. This has been shown in numerous experiments at government stations and many feeders have found it out in their own experience.

"Chemists tell us that there are three classes of materials in feeds, proteins, starch and sugar. Protein is the constituent found most largely in peas and it is this material that is necessary in building up bone and muscle. This material also is most necessary to market production and hence a material rich in protein is almost certain to be a desirable feed for dairy cows. It is the most expensive to buy and the least common in farm crops."

Cows inherit the tendency to give large or small quantities of milk, but many of us never give our cows an opportunity to live up to their hereditary capabilities.

## The In

By M. C.

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**The Influence of Heredity\***

By Chas. P. Reed, Michigan

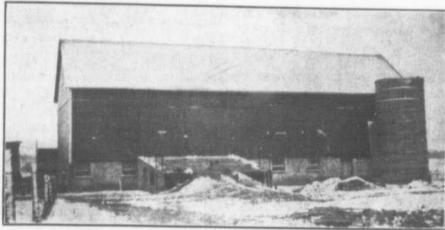
When a calf is born into this world it is apt to resemble the male parent in some respects and the female in other respects. If its resemblance to the male parent is stronger, we say the sire is more prepotent than the dam. Reverse the situation and say the dam is the more prepotent. If more calves are born of the same sire and dam and show a variation in their resemblance to sire and dam, some favoring the dam, others favoring the sire, we doubt our former conclusion concerning the prepotency of sire and dam, and soon decide that it is a hard matter to determine the relative influence of sire and dam on the offspring and we are unable to accept what the scientists call Galton's Law. This law is possibly too geometrical for the regular breeding operations in nature, but it is accepted by many as expressing approximately the influence of each generation back from the new born calf.

As briefly as possible, the law is that one-half of the influences that

scientists as Mendel's Phenomena, will operate to his advantage and animals of merit are liable to outcrop in some regular ratio, but the preponderance of data is against this former hope.

We have already stated that we credit the value of a mature animal one-half to hereditary influences and one-half to environment after conception; also we credit each of the great-grandparents of a calf with one-sixty-fourth of its hereditary qualities. That will be one-hundred-twenty-eighth part of the character of this animal at maturity. If, then, we must go back to the great-grandparents of a calf to find great excellence, we are enjoying slim chances of ever making a high-class animal of this calf.

Test the truth of this statement as you will, I think it will stand. If no record of the merit of the intervening animals has been made, you have little to judge by; they may have had great merit or they may have had none. This cannot be determined. We need to know the history of such cases.



Comfortable and Commodious Buildings Rob Winter of its Terrors

The large stock barn of A. Watson and Sons, St. Thomas, Ont., whose farm was described in the last Breeders' Number of Farm and Dairy, may be here seen. Notice how well lighted are the stalls, the provision for storage room under the approach and the silo, which affords cheap and succulent feed for fine herd of Holsteins.

—Photo by an editor of Farm and Dairy.

determine the character of the new born calf lies within the parents, the other half to their ancestry as follows: One-fourth within the grandparents, one-eighth within the great-grandparents, one-sixteenth in the next generation back, and so on indefinitely. This law gives credit to the sire and dam in each generation for the characteristics of the calf.

We see, then, if the character of the parents affects the calf one-half, each parent will affect its qualities one-fourth. With four grandparents, all affecting the calf a total of one-fourth, each one contributes but one sixteenth to the heritage of the calf. Another generation back there are eight great-grandparents, each one affecting the calf one-sixty-fourth of its total heritage. Thus we see that a pedigree of more than four or five generations back is of little or no value.

**WILL THE CALF BE BETTER?**

If a pedigree of four or five generations shows continual improvement we can have hopes that the young calf will be as good or better than its ancestry; but if no improvement in successive generations is shown, the supposition is more than probable that deterioration is in progress in that line. Any man selecting breeding animals from a line that goes back for five or more generations to show an animal of merit is making a decidedly poor choice. Some will argue that a law of nature, known to

Another thing we must remember. The ability to perform and the transmitting of that ability to perform are separate functions. Many animals possess both functions; others do not. If this great grandparent referred to does not transmit this ability for large performance, there is no hope of making a large performer of the animal in question. If this great grandparent did possess the ability to transmit its performing ability, and the intermediary ancestors possessed merit but no record kept, there is good reason to believe the succeeding generations will be good.

**Differ in Milk Prices**

Wholesale milk dealers in Toronto want a price of \$1.30 for an eight-gallon can, delivered at the dairy, for the summer months, but the retailers object to paying more than \$1.25. The Retail Milk Dealers' Association at a meeting held yesterday afternoon took this stand.

The summer price last year ranged from \$1.15 to \$1.27, and the winter price which the retailers are now paying runs from \$1.45 to \$1.62.

Dealers do not think there is any danger of Toronto going dry as far as milk is concerned. The price will be settled shortly.

Some dairymen object to fat milk cows, but we consider that a dairy herd in good condition is a sign of good feeding. Of course it is not wise to make a cow butcher fat, but it is equally unwise to allow her to get so poor that her vitality and production are lowered.



**Don't throw away the old furniture but refinish it.**

You can do this at a very small cost. For instance, if you have an old table, or chair, or a bureau that is worn and scratched give it a coat of S-W Varnish Stain. It will look as good as new.

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\*Paper read by Charles P. Reed, Howell, secretary of the Michigan State Holstein Breeders' Association, before the Western Michigan Holstein Breeders' Association at Grand Rapids, Feb. 7, 1912.

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AND RURAL HOME

Published by the Rural Publishing Company, Limited.



**1. FARM AND DAIRY** is published every Thursday. It is the official organ of the British Columbia, Eastern and Western Ontario, and Bedford District, Quebec, Dunsmuir's American and Winnipeg, and the Canadian Holstein Cattle Breeders' Association, U. S. Representative, W. H. Stockwell, 62 North La Salle Street, Chicago, Ill.

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

**CIRCULATION STATEMENT.**  
The paid subscriptions to Farm and Dairy exceed 15,200. The actual circulation of each issue, including copies of the paper sent subscribers who are but slightly in arrears, and sample copies, varies from 18,150 to 17,500 copies. No subscriptions are accepted at less than the full circulation rates.

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

### OUR GUARANTEE

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

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

## FARM AND DAIRY

PETERBORO, ONT.

### THE LABOR PROBLEM

If we would ever come to understand the outlook of the hired man we must try and put ourselves in his position. Let us try and see ourselves as the hired man sees us.

Here is a farmer who is in the habit of marketing his butter at the nearest grocery store. All goes well for about six months, then the dealer suddenly announces that he has all the butter he needs and cannot take any more. He admits that he might make arrangements whereby he could handle the butter the year round, but he thinks it would be a lot of trouble to him, and anyway, he knows that in all previous years this farmer has always been willing enough to bring back the butter when the dealer was again good and ready to handle it. The dealer has not always paid very amply for this butter, but then the farmer knows were he to ask for his

pay he would usually get it, or at least he would get part of it.

Suppose that one fall this farmer had a big bunch of cows coming in fresh and not considering it advisable to dry them all off because his usual market for butter was closed down for the season, he goes to the nearest city and finds there a dealer who will take his butter the year round, pay him a higher price than did the country grocer, and remit him his pay regularly every month without being asked. Do you suppose that when the next spring arrived that that farmer would again take his butter to the country grocer? The question answers itself.

And so it is with the hired man. The day has long gone by when the hired man is willing to work for the six months that the farmer really needs him and then do chores all winter to pay for his board. These men who were once so readily available in the busy season all through the country, have now discovered that there is a steady all-the-year-round demand for their services in the city. And like the farmer with his butter, when they find this market for their labor they are likely to stay there. One of the things that must be done before the labor problem will be solved is to supply work the year round.

### TEACHING COOPERATION

The great difficulty in getting cooperation started in this country is that few of our farmers have studied the advantages of cooperation or have any idea of how to go about forming a cooperative concern. Co-operative education is needed, and this, we believe, should be imparted through the educational institutions that we already have, our colleges, high schools, and public schools. Here is the language of a bill now before the legislature of one of the states of the United States, the principal of which might well be adopted in our Canadian provinces:

"That from and after the passage and approval of this act, the university of this state, the state normal schools, and the high schools of cities and villages of this state, shall teach and give instruction in cooperative agriculture, cooperative buying and selling and distribution of farm products and purchase of such articles as are necessary for use on the farm; in cooperative manufacture and sale and distribution of manufactured articles, and shall also teach the laws relating to these subjects."

Our educational system is supposed to be designed to increase the productive efficiency of our people. A start has already been made in several provinces of Canada towards imparting a knowledge of elementary agriculture in the rural schools. All of our efforts so far have been bent towards increasing the pupils' knowledge of production. Why not give our pupils instruction also in cooperation which involves the marketing and distribution of the goods produced. Only then will our schools be imparting a full, rounded, practical education. And the first point towards achieving this end is suitable legislation to set the ball-rolling.

### WHERE ONTARIO FALLS DOWN

Right on their own home market Ontario potato growers are not holding their own with the growers of the more eastern provinces. The examination of market quotations at Toronto and other central points in Ontario shows that for several years potatoes grown in Nova Scotia, New Brunswick, and Prince Edward Island have commanded a premium of five to 15 cents a bag over the home grown product. Why should this be?

All the dealers give the same explanation. It is a matter of uniformity. In maritime Canada whole counties will grow but one variety of potato; it is possible to collect not only car loads but train loads of potatoes uniform in variety and fairly uniform in size. In Ontario a car load lot from any one shipping point might contain all the way from five to 20 different varieties of potatoes of all shades of color and widely varying size and showing a great difference in quality.

Ontario can grow as good potatoes as any other part of Canada. Had the Ontario product the desired uniformity it would not be discriminated against on the market. The only way in which the difficulty can be remedied is through an understanding among the potato growers of each neighborhood. Farmers' Clubs would render a great service to the potato growing industry of Ontario did they take this question in hand among their members.

### GOOD BANKING

It is not often that we farmers have an opportunity to borrow money from the banks without interest. Such an opportunity, however, has been extended to the farmers of Iowa by a number of public-spirited bankers who can see far into the future. They have offered to loan money to farmers without interest who will use that money in building silos. This offer has been accepted by some farmers, and already the arrangement, although running over only one year, has resulted in mutual benefit. We are not urging that Canadian bankers follow the example of their Iowa brethren and loan money without interest. We do believe, however, that when a farmer comes to a banker with such a good proposition as the erection of a silo that the banker should be as willing to accommodate him as is the business man. Besides, the silo offers an opportunity for investment that is just as safe as the best proposition that a business man could place before a banker.

In 1911 we had an exceptionally dry season all over Eastern Canada. In many parts of Ontario no rain fell from the time the seed went into the ground until the crops were in the barns. And yet in this exceptionally dry season underdrained land produced on an average \$16.50 more an acre than land that was not drained, according to data collected by the Department of Physics at the Ontario Agricultural

### Misguided Benevolence

In Winnipeg, Toronto, Montreal and other Canadian cities well meaning religious and charitable organizations are appealing to the public for money with which to send food, clothing and Christmas cheer into the poverty stricken homes of these cities. In the majority of cases poverty haunts the doors of these humble homes because the bread-winners have been forced by economic pressure to accept less than a living wage. Yet most of these poor people need only a square deal and not charity. They are the victims of our system of land speculation, protection and special privilege generally. If the misguided philanthropists would devote their money to improving conditions, these unfortunate ones would have Christmas cheer more than one day in the year and would not be humiliated by accepting as a gift that which the Creator intended to be their right.—Grain Growers' Guide.

College. In wet seasons the results are even more marked, the underdrains in many cases making the difference between a good crop and no crop at all. In an average season Prof. W. H. Day has computed that the increased returns in underdrainage will amount to over \$25 an acre. Under-drainage is one of the few investments that we know of where both principal and interest are returned in two or three seasons.

The California Fruit Growers' Exchange, the largest cooperative fruit growers' association in the world, is in a serious plight. Reserve Capital. This association handles the most of the citrus fruit grown in California. It operates without capital, except the annual assessment that it makes on its members, the assessment being proportioned according to the amount of fruit handled for each. This plan has its advantage in that the growers receive all that their fruit brings on the market, minus only the cost of supporting the organization. No reserve, however, has been built up and this year when the citrus crop has been almost ruined by freezing and there will be little fruit to ship, the large selling organization must be maintained just the same. This will entail a heavy tax on the growers in the very year when they can least afford it. A substantial reserve carried over from the good years would come in mighty handy in tiding the organization over this bad one. Moral: No cooperative concern maintaining an extensive selling organization should operate without providing for a strong reserve to tide over bad seasons. Canadian cooperators might well take a lesson from the plight of their Californian brethren.

When a man is too busy to think, take it from us, he is on the down grade.

How is it of weighing most part of the market among the

One or two small and h do advertise even their se ciation they needs a scal themselves h C a farmer platin; sca fail to get In this tuinity even

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pay them to do paper advertisin Perhaps they awake to this opportunity. They graited into the start out to dev and come into down their pro cost and mak try their busin

It's the Dairy more than ot greatest need of facturers will fi market is made profitably dev these Dairy far reached exclusiv Dairy— "A Paper Farm

**AD. TALK**

LXXIII.

How is it that manufacturers of weighing scales have for the most part neglected to develop the market that awaits them amongst the farmer people?

One or two manufacturers of small and handy platform scales do advertise occasionally. But even they seem to lack an appreciation of how badly a farmer needs a scale. If they realize themselves how profitable a thing to a farmer one of these handy platform scales would be, they fail to get it over to the farmers. In this they are missing an opportunity even in the advertising, a little of which they do occasionally put out. Their copy is not "up to snuff."

Handy weighing scales are essential to best economy of a farm. The butcher comes along to buy a veal calf. What will it price be? Well, we know that many pretty good farmers would accept a lump sum. Hundreds would be satisfied with a price of \$1.00 or thereabouts a week covering a 5 or 6 weeks old calf. And yet we know one bright farmer who always wheels around his handy platform scale when the veal calf is to be sold, and it goes by so much per pound—the market price, which he has ascertained from the market pages of his favorite farm paper. He gets \$12.00 to \$14.00 for his veal calves!

And then there's the pigs. They represent what is really solid money. It could never pay to sell them by guess. Yet very few farmers are weighing their pigs. They are trusting the dealer or the public weighman. It is worth while to keep check on these men.

The dairy farmer, with his milk or his cream going to market each day, or several times a week—he should weigh and keep record of the weights. It'll pay him to keep constant check on the scales deciding his pay at the other end; yet few there be who are doing it!

When selling grain or in taking it to grist, 'tis most important that the weight be taken and close tab be kept on outgo and return; yet most farmers are getting it blind right here—beyond an approximate guess, since they have not the means of a convenient scale to take the weights.

To keep a farmer in touch with gains of his fattening hogs, his fattening cattle, sheep, poultry, etc., a handy scale is ever valuable, as indeed it is ever for weighing the least, and knowing — not guessing — that the quantity being fed is the most profitable.

Why don't the manufacturers of these weighing scales give the farmers a vision or mental picture of these things? It would pay them to do this through farm paper advertising.

Perhaps they will some day awake to this their big live opportunity. They'll get these ideas started out to develop their market and come into their own, cutting down their present great selling cost and making more satisfactory their business all round.

It's the Dairy farmers, much more than others, who have greatest need of scales. Manufacturers will find out that this market is most readily and most profitably developed amongst these Dairy farmers — the kind reached exclusively by Farm and Dairy—

**"A Paper Farmers Swear By"**

**Farming the Basis of Prosperity**

Sometimes men make the mistake of getting the cart before the horse, or, in other words, some large classes of men are grievously mistaken as to the relation of the farm to prosperity.

During the quarter of a century in which we were minding the fertility of the corn-belt, and selling it at the cost of mining to the great cities of the East and to foreign lands, the one thing that we wanted above all others was a market, and a market as profitable as possible. Farmers had the idea that if factories were increased in number and the number of their operatives increased and more fully employed, then we should live on a basis of permanent prosperity—in short, that the fully employed factory was the basis of the prosperity of the country. In England, a free trade country buying four-fifths of its food from foreign lands, and thus largely independent of the farm, this was still true; but it is not true in the United States.

The basis of prosperity in our country is the farm; and the aim of legislation should be to give the farmer a square deal in both his buying and his selling, and thus enable him to create values to the utmost possible limit. The manufacturer does not create; he merely fashions. The transporter does not create; he merely takes products from where they are abundant to where they are scarce. The middleman does not create. He simply distributes products to where they are needed for immediate consumption.

The farmer alone creates; and prosperity is based on the magnitude of the creation, and not on the transportation, or distribution, or modification of form. When the farmer has plenty of money and his employees are well paid, business is prosperous on one end of the country to the other; but when the farmer is living from hand to mouth, when there is not employment for labor on the farm, then there will speedily be big black trouble for business everywhere. If the farmer were with one accord to stop purchasing everything that they do not absolutely need, we would have a panic from one end of the country to the other, from which we would recover in 90 days after the farmers began buying again according to their normal requirements.

There are large sections of business men who realize this fully. No one realizes it better than the railroads. Their eyes are ever upon the farm. They study the clouds, note the rainfall, note the temperature; for it is upon these elements that the magnitude of their business mainly depends. The farmer, not considering himself a yellow dog behind the wagon, or a minor factor in the great business of this nation, but as the very basis of all our prosperity. He will be all the better farmer for thinking so; and a still better farmer if he acts constantly on that conviction.

Not only is the farmer the basis of our material prosperity, but upon his rectitude, his freedom from prejudice and from partisanship in politics, depends the permanency of our free institutions. No nation has ever survived after the farmers ceased to take an interest, an active interest, in public affairs. When the farms of the Roman Empire were tilled by slaves and great numbers of the farmers had moved to town, the nation was tottering to its fall. So long as the farmer keeps a level head, votes his own thinking and his own voting, the country is safe; but when he begins to vote as the politicians tell him to, when he begins to lose his vote, then gangrene has begun in the country, and even a city cannot long survive unless there is reformation.—Wallace's Farmer.

**DE LAVAL**  
**CREAM SEPARATORS**  
**Save Their Cost**  
**Every Year of Use**

If you are thinking about buying a cream separator, and have only a small amount of ready cash to invest, don't be tempted to put your money into one of the so-called "cheap" machines.

Why pay your hard-earned money for a "cheap," trashy machine, when you can buy a reliable De Laval upon such liberal terms that

It will more than save its cost  
while you are paying for it.

When you buy a De Laval you have positive assurance that your machine will be good for at least twenty years of service, during which time it will save every possible dollar for you and earn its original cost over and over again.

If you purchase the so-called "cheap" separator, you must pay cash in advance and then take the chance of the machine becoming worthless after a year or two of use, to say nothing of the cream it will waste while it does last.

More De Laval machines are in use than any other make. There is a reason. Be sure to see the local De Laval agent and SEE and TRY a De Laval before you buy any cream separator.

The new 72-page De Laval Dairy Handbook, in which important dairy questions are ably discussed by the best authorities, is a book that every cream farmer should have. Mail free upon request if you mention this paper. New 1913 De Laval catalog also mailed upon request. Write to nearest office.

**DE LAVAL DAIRY SUPPLY CO., LIMITED**  
MONTREAL      PETERBORO      WINNIPEG      VANCOUVER

**FARMERS' DAUGHTERS**

With their good stock of common sense and a good general education make splendid business women. A special course of training with us has made thousands of them independent as stenographers because they receive good salaries. We would like to send our Catalogue, describing our work, to every one who wishes to move out into better things. Address—

**SHAW'S BUSINESS SCHOOLS,**  
TORONTO, CANADA.  
W. H. SHAW - President.

**Mallory's Seed Corn**



Highly productive, prize winning strains of best standard varieties at moderate prices. Strong growing seed. Shipped on ten day approval. Returnable at our expense. Send for samples and circular. Also Write N. E. MALLORY, Bienenheim, Ont.

**\$3 a Day Sure**

Send us your address and we will show you how you can make \$3 a day sure. Send us your address and we will gladly mail you a copy of our new book, "How to Make \$3 a Day Sure" by the only BUREAU MANUFACTURING CO., Box 1139, WINDSOR, ONT.

**ROBBY'S**  
**CAFE MEAL**

**CREAM EQUIVALENT FOR RAISING CALVES AND YOUNG PIGS**  
CONTAINS A MUCH HIGHER PERCENTAGE OF REAL VALUE THAN OTHERS  
SOLD BY LEADING MERCHANTS, OR DIRECT FROM W<sup>o</sup> RENNIE CO LIMITED  
TORONTO - MONTREAL - WINNIPEG - VANCOUVER

**BEAVER DAIRY SUPPLIES**

W.A. DRUMMOND & CO.

Look for the Beaver  
Great trade-mark when  
buying new Dairy apparatus  
Stands for the highest  
in quality.  
Send for our New Catalogue.  
Contains information re  
labor-saving devices and  
is sent FREE. Write for  
it now. Address:

DEPT. "B."

**W.A. DRUMMOND & CO.**  
214-KING, ST. EAST.  
TORONTO - CANADA

**SKIPPED HILLS RAISE  
NO POTATOES**

Every hill you miss in planting  
means money lost out of your  
pocket. No machine can plant  
perfectly unless there is hand con-  
trol in hand con-  
tention of  
the seed  
and one  
of the  
best  
ways  
to  
avoid  
this  
is to  
use  
a  
planting  
machine  
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seed  
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the  
furrow  
and  
cover  
it  
with  
the  
soil  
at  
the  
same  
time.

**IRON ACE** (Patented)  
Planting Machine

Write for  
literature  
and  
price  
list  
to  
The  
Iron  
Ace  
Planting  
Machine  
Co.,  
100  
New  
York  
St.,  
New  
York,  
N. Y.

W. H. Wilson Co., Limited  
40 Queen's Ave.  
Toronto, Ont.

**CHEESE MAKER  
WANTED**

Good experienced man to take charge of  
factory. Duties to commence May 1st.  
\$150. Apply to  
**OSK GROVE CHEESE & BUTTER CO.**  
Limited.  
NEW HAWBURY, ONT.

**Highest Price for Cream**

I.—We supply cans and pay express  
charge.  
II.—Test every shipment upon ar-  
rival and send a statement for same.  
III.—Pay every two weeks and cash  
checks at par.  
It costs you nothing whatever to  
give our system a trial.  
Let us send you a can and enable  
you to try a few shipments.  
For fuller particulars write  
**The Berlin Creamery Co.**  
Berlin - Ontario

**WANTED**

Unmarried Buttermaker for cream-gather-  
ed creamery. State qualifications. Full  
particulars on application to Box 1925,  
FARM AND DAIRY, PETERBORO, ONT.

**Agents Wanted**

A man wanted in every dairy district to  
collect renewals and get new subscriptions.  
Hustlers needed who will cover the district  
thoroughly by spring. State occupation and  
if can work entire spare time.  
FARM AND DAIRY, Peterboro

**CREAM CREAM**

Sweet or Sour

We are buyers of Cream and will pay the highest price for it per  
Butter Fat test. We will supply the cans. Make prompt returns by Bank  
Draft, payable in part, at any Bank in any town.  
We will operate the year around.  
References Bank of Montreal.

**THE BOWES COMPANY, Limited**  
74-76 Front Street E. - Toronto

## Creamery Department

Butter makers are invited to send  
contributions to this department to  
ask questions on matters relating  
to butter making and to suggest  
subjects for future address  
letters to Creamery Department.

### Does Richness of Cream Affect Moisture\*

By O. F. Hunsiker

Much has been said and written  
in the dairy press and in our text  
books on the effect of the richness  
of the cream on the moisture content  
of butter and there appears to be  
considerable confusion as to the real  
importance of this one factor. The  
average American buttermaker holds  
that the richer the cream the more  
water will there be in butter. The  
Danish buttermaker, on the other  
hand, claims that this cream tends  
toward butter with higher moisture  
than rich cream.

#### EFFECT OF RICHNESS OF CREAM

19 churning, winter, 17 per cent to  
24 per cent fat in cream, 13.47 per  
cent moisture.

19 churning, winter, 29 per cent to  
30 per cent fat in cream, 14 per cent  
moisture.

4 churning, summer, 18 per cent to  
20 per cent fat in cream, 15.86 per  
cent moisture.

3 churning, summer, 37 per cent to  
48 per cent fat in cream, 14.45 per  
cent moisture.

Our own experimental results have  
convinced us that this factor of rich-  
ness of cream has no important bearing  
on the moisture content of butter  
and that its effect, if there is any, is  
indirect only. In one series of ex-  
periments made in summer, the but-  
ter from the richer cream contained  
less moisture, while in another series  
the butter from the richer cream con-  
tained more moisture. These findings  
suggest that the moisture content of  
the finished butter is affected by this  
factor only in so far as it influences  
the condition of the butter for the  
working. Other conditions being equal,  
the richness of the cream influ-  
ences the length of time and ease  
of churning. This in turn may or  
may not affect the firmness of the  
butter granules, according to the sea-  
son of year and temperature of the  
churn room. In a cold churn room  
the longer churning of thin cream  
tends to make firm granules. The  
firmness of the butter granules affects  
the amount of water left in the churn  
and the per cent of water retained in  
the working process unless the latter  
is controlled by the buttermaker.  
Firm butter mixes with and holds  
water less readily than soft butter.

Attention is further called here to  
the fact that there is a limit of low  
temperature and thin cream that will  
produce these results. If frequently  
happens where thin cream is churned  
at a very low temperature, that the  
churning process is prolonged to such  
an extent as to partly destroy the  
grain of the butter, making a butter  
body. In this condition the latter

\*Extract from an address.

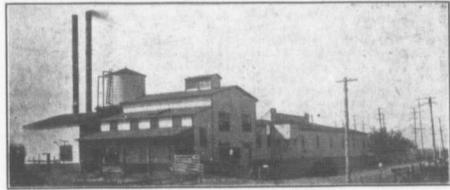
tends to take up and retain excessive  
moisture.

These findings also help to explain  
why the results and opinions of dif-  
ferent investigators and buttermakers  
are at variance. It is evidence that  
these contradictory conclusions were  
arrived at through the failure of the  
buttermaker on both sides of the At-  
lantic to take into careful considera-  
tion all the conditions under which  
their results were obtained.

### Anent Daily Records

By James Sorenson

Right now is a good time to start  
to keep a daily record of the work in  
the creamery. It will not be long be-  
fore spring is here and with spring  
and summer comes more cream,  
which means more work for the but-  
termaker, and when the buttermaker  
gets real busy he is not so liable to  
start to do things that will mean  
more work to him. But at this time



### Where Many British Columbia Farmers Market Their Milk

The large milk condenser, here illustrated, affords one of the milk markets of the farmers in the vicinity of Chilliwack, B.C. The British Columbia Milk Condensing Co., to whom we are indebted for this photo of their plant, finds that competition for milk in B.C. makes it necessary to pay considerably higher prices than rate at Eastern condenseries.

of the year there are not many but-  
termakers so busy that they cannot  
spend a few minutes' time for some-  
thing outside of their regular work,  
and for a buttermaker who never  
kept any record of his work we know  
of nothing that he could do that  
would be of more real value both to  
his creamery and himself, than to  
practice up on keeping some kind of  
a daily record of what he does daily  
in the creamery.

You may be one of the few who  
think that keeping daily records in  
the creamery is just a fad, and possi-  
bly believe that it will be out of  
date in a short time, but you will  
find that you are mistaken in this.  
The keeping of daily records in the  
creamery is one of the modern steps  
in developing the creamery business,  
and no creamery can be called up-to-  
date unless some system is used to  
keep track of the business every day.

Did you ever stop to consider the  
advantages of keeping daily records?  
If you have, you must admit that no  
creamery can afford to run along a  
whole month without keeping some  
kind of a daily record. A daily re-  
cord makes it possible for the but-  
termaker to know what his overrun  
is every day, and if it is either too  
high or too low he can get busy at  
once and find where the trouble lies.  
This old method of running along a  
whole month without knowing any-  
thing about the overrun was all right  
when we didn't know any better, but  
in these days of competition we must  
get down to a business basis, and this  
cannot be done without keeping  
daily records.—Dairy Record.

In addition to the ever-increasing  
demands for city milk, the ice  
cream trade is taking increasing  
quantities of cream. Statistics have  
been collected in 24 cities in Canada,  
and it is estimated that in 1912 the  
ice cream made was equivalent to 2,  
000,000 lbs. of butter and 4,000,000  
lbs. of cheese.—J. A. Ruddick, Dairy  
Commissioner.

### Against Neutralizers

By W. H. Cooper

The chief objection to the use of  
neutralizers in cream is that it  
enables the use of cream for butter  
making purposes which otherwise  
would not be available for such pur-  
poses. Butter from such cream not  
neutralized would often be unfit for  
market purposes and would have to  
be sent to the renovator. There is  
also a possibility of the formation of  
poisons or toxins in old hold cream,  
and, while their amount is probably  
too small to be of great importance,  
cream containing them should not be  
used for the manufacture of a food  
product.

Another serious objection is that  
the use of neutralizers tends toward  
the production of a poorer quality of  
raw material. The creamery man  
knows that the cream will be treated,  
and so is not so careful in handling

and caring for it as he otherwise  
would be. More important than this,  
the patron will be made practically no  
effort to furnish better cream as long  
as he knows that a fair grade of but-  
ter can be made from inferior raw  
material through the use of chemical  
agents. There is no incentive for him  
to do so, as long as the same price  
is paid him for the fat in old  
sour cream as for the fat in fresh  
sweet cream this condition will con-  
tinue to exist.

From a moral standpoint, we can  
also say that the use of neutralizing  
agents is wrong. Their use in under-  
making is on a par with the use of  
preservatives in the manufacture of  
other food products, and which is for-  
bidden by law. The purpose in either  
case is the same—to permit the use  
of raw material which otherwise could  
not be employed except in the mak-  
ing of a very inferior product. There  
is no more reason why the use of  
neutralizers should be allowed in the  
manufacture of butter than why pre-  
servatives should be allowed in the  
preparation of other food products.  
Moreover, it is not fair to the con-  
sumer. If he pays for butter sup-  
posed to be made from first-grade  
proper ripened cream, he should not  
be given butter made from stale  
overripe cream which has been treat-  
ed with neutralizing agents to con-  
ceal this fact.

It would be wise to start the new  
season by throwing away some of the  
old cans and rusty pails and investing  
in new ones.

The need of further education among  
patrons was shown by this examina-  
tion of 272 farms, on which it was  
found that only 10 per cent had in-  
fow milk cooling and 15 1/2 per cent  
had no attempt whatever to cool  
milk. Of all of these farms the 50  
best ones were selected and only 20  
were found with silos. Only 13 gra-  
ze alfalfa.—Report on Ontario Provin-  
tial Dairy Farm Census.

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**Cream**

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Very large mo  
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Second-hand 1  
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A Pure Whole  
**CALVES**  
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Save \$15.00 to  
Write for  
CANADIAN  
FLOUR  
Toro



## WINDSOR DAIRY SALT

**Swept The Boards At All The Fairs**

1911 was a triumph for Windsor Dairy Salt. Practically every prize for butter-making was won by someone who used Windsor Dairy Salt.

Those, who make their living out of their dairies, say that Windsor Dairy is their old standby. They always rely on it because they know it is pure—because it makes the richest, most delicious butter—because they win the prizes and get "Top prizes" for their butter—when they use WINDSOR DAIRY SALT.

## Creamery For Sale

Creamery: running summer and winter. Very large make. Everything in first-class order. Large house. Good ice house and refrigerator. Large stable with sheds and other buildings. 6 acres good land. Close to town and railroad. This is one of the best dairy districts in Ontario. Write NELSON SCHATZ, BADEN, ONT.

## FOR SALE

Second hand Milk Vats and agitators complete, in first-class condition. Also Gang Presses and 14-inch Tubs. For prices and particulars, apply Box 1023, FARM AND DAIRY, PETERBORO, ONT.

MAN WANTED, with or without experience, to work in Ballymore Cheese Factory. Apply Geo. Kenny, Ballymore, Ont.

A Pure Wholesome Nutritious Meal

## CALFINE

CALVES LAMBS COLTS PIGS

**GUARANTEED ANALYSIS**

Protein . 20 per cent.  
Fat . . . 8 per cent.  
Fibre . . 4 per cent.

Save \$15.00 to \$20.00 on Your Calf Feed

Write for Booklet and Prices  
**CANADIAN CEREAL AND FLOUR MILLS, LIMITED**  
Toronto, Ontario

## 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 letters to The Cheese Maker's Department.

### Increase Cool Curing Rooms

(Concluded from page 4)  
in all factories. There are several difficulties which explain the slowness with which cool curing has progressed in Canada.

NO DISTINCTION IN PRICE  
The greatest hindrance to the rapid extension of cool curing facilities in Canadian factories is, there has not been enough distinction in prices between cool cured cheese and cheese cooled in the ordinary curing room. Even where there is a distinction it is not sufficient to greatly encourage an investment in a cool curing room. This is not because cool cured cheese is not appreciated by buyers and the consuming public. It is because there is so little of it produced. On no cheese board in Canada do the majority of factories offer cool cured cheese and on the great majority of cheese boards, there is no cool cured cheese. Before there is a distinction in price which will encourage the investment in a cool curing room there must be a larger quantity of it produced. Buyers claim that if they offer an advanced price to two or three factories for cool cured cheese it would only antagonize the salesmen of the greater number of factories, which were not equipped with curing rooms, and the buyers would be hid up accordingly.

### WE MUST INCREASE QUANTITY

The only way in which we can hope to secure recognition for a superior production on the cheese boards is to make the cool cured product the largest and most important part of the offering. This can be done only when the majority of all cheese factories have better cool curing facilities. When such is the case, those factories which have no cool curing rooms will be discriminated against in price to such an extent that it will be absolutely necessary for them to establish cool curing rooms. When all of our factories are shipping a cool cured product we need not worry about demand or prices.

As time goes on, the dairy industry, and consequently the cheese industry will become of greater and greater importance. The only other markets for milk are the retail trade in the raw product, the condensers, and the creameries. Of these markets, the first two are limited and can use but a small portion of the total flow of milk. The present relative standing of these factories and creameries prove that the creameries cannot be expected to take a very large proportion of the milk produced. It is evident that a large portion of the rural population of Canada in dairy districts will have to depend on the producing of milk for the cheese factories for a living.

Anything which we can do to further this industry will not only be of great present benefit, but it will be putting the industry on a firmer footing for the benefit of future generations. In Ontario at the present time we have registration of factories and licensing of makers. These regulations will improve the quality of the cheese made. But the best of makers cannot produce a first-class article without proper curing facilities. If we are to hold our foreign market and create a large home consumption, a first-class article is necessary.

The two greatest needs of our dairy industry are a better milk supply and a better place to keep the cheese after it is made.—R. W. Ward, Dairy Instructor, Peterboro Co., Ont.

## Wood or Concrete Silos, Which are best?



Over in the U. S. many experiments made by the various agricultural experiment stations have conclusively shown that silage does not keep as well in cement, stone or brick silos as in silos constructed of wood.

Furthermore, the advantage of the wood silo over cement, stone or brick is greatest in a cold climate.

The vital question is "Which silo will keep the silage in the best condition?"

If you are interested in reading the unbiased opinion of scientific investigators who have given this question careful investigation we shall be glad to send you, upon request, reprints of some of the experiment station bulletins giving in detail the reasons why wood silos make the best silage and keep it in the best condition.

We shall also be pleased to send you our catalog and give you any other silo information desired.

We are exclusive distributors in Canada of the World's Standard De Laval Cream Separators, and also carry a complete line of creamery and dairy machinery and supplies. If interested write for separate catalogs.

## DE LAVAL DAIRY SUPPLY CO., Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA  
MONTREAL PETERBORO WINNIPEG VANCOUVER

**CREAM WANTED** Highest City prices paid for cream. We furnish cans, pay all charges, remit promptly. Haven't paid less than \$10 for two months. Write  
TORONTO CREAMERY CO., LTD., Toronto

## Cheesemakers

Make big money in your spare time getting subscriptions for Farm and Dairy. Write our Circulation Department now for full particulars

## GOOD PRICES FOR CHEESE



## Canadian Cheese

MAKE no mistake about it—the better the cheese you make the better the price your butter will bring. Keep quality up if you want to keep price up. You can make the very best quality of cheese if you use

## "Tweed" Sanitary Cheese Vats

Made entirely of steel. No wood to rot out in a season. Easy to keep clean and sweet. No places for the milk to loiter in or decompose. "Tweed" Vats have no corners or cracks and drain out thoroughly.

The lining laps over and around "Tweed" patens are being infringed underneath the edge making an ideal surface to work on. "Tweed" Vats are fitted with gears at each end, and fell it needful to issue the following announcement and warning:

We own the patent rights for Steel Cheese Vats for Canada. Anyone buying any other Steel Vat will be promptly prosecuted

Cheese makers and directors of cheese factories are invited to send for catalogs and quotations. Address  
**Steel Trough & Machine Co., Ltd., 6 James St., W., Tweed, Ont.**



GARNER up pleasant thoughts in your mind, for pleasant thoughts make pleasant lives.—Wilkins.

## Rose of Old Harpeth

By MARIA THOMPSON DAVIES  
"Copyright, 1912, The Bobbs-Merrill Company"  
(Continued from last week)

VERY carefully he laid him in the little cot that stood beside Rose Mary's bed in her room down the hall, and with care he settled the little dog against the bare briar-branched feet, returned to the moonlight porch and resumed his seat at Rose Mary's side.

"There is something about the General," he remarked with a half smile, "that—that gets next to me. He has a moral fibre that I hope he will be able to keep resistant to its present extent, but I doubt it."

"Oh," said Rose Mary, quickly looking up with pierced, startled eyes, "he must keep it—he must; it is the only hope for him. Tell me if you can how to help him keep it. Help me help him!"

"Forgive me," answered Everett in quick distress. "I was only scoffing, as usual. He'll keep what you give him, never fear, Rose Mary; he's honor bound."

"Yes, that's what I want him to be—honor bound." You don't know about him, but to-night I want to tell you, because I somehow feel you love him—and us—and maybe if you know, some day you will help him. Just after I came back into the Valley and found them all so troubled and—and disgraced, something came to me I thought I couldn't stand. Always it seemed to me I had loved him, my cousin, Uncle Tucker's son, and I thought—I thought he had loved me. But when he went out into the world one of the village girls, Grassy Satterwhite's daughter, had followed him, and—yes, she has been his wife for all the time we thought she was working in the city. They had been afraid—afraid of Uncle Tucker and me—to acknowledge it. She was foolish and he criminally weak. After his tragedy she came back—and nobody would believe—that she was his wife. I found her lying on the floor in the milkhouse and though I was hurt, and hard, I took her into my room—and in a few hours Stonie was born. When they gave him to me, so little and helpless, she hurt me, so little and helpless, she hurt me, and she married Todd Crabtree and moved West. They didn't want Stonie, so she gave him to me. When my heart ached so I couldn't stand it, there was always Stonie to deal it. Do you think that heart-aches are sometimes just growings pains the Lord sends when He thinks we have not courage enough?" And in the moonlight Rose Mary's tear-stained eyes gleamed softly and her lovely mouth began to flower out into a little smile. The sunshine of Rose Mary's nature always threw a bow through her tears against any cloud that appeared on her horizon.

"I don't believe your heart ever needed any growing pains, Rose Mary, and I resent each and every one," answered Everett in a low voice, and he lifted one of Rose Mary's strong slim hands and held it close for a moment in both his warm ones.

"Oh, but it did," she answered, curling her fingers around his like a child grateful for a caress. "I was romantic—and intense, and I thought of it as a castle for—just one. Now it's grown into a wide, wing-spreading, old country house in Harpeth Valley, with vines



A Pleasant Site Amid the Elms of the Stewartie Valley

For the beauty of its natural scenery, Nova Scotia claims to hold the premier position among the Eastern provinces of Canada. The Stewartie Valley, in which is located the home of Mr. Bryan Foster, here illustrated, is especially noted for its fine elms, some of which may be seen in the illustration. Mr. Foster's home is the only brick farm house in that part of the province.

Photo by an editor of Farm and Dairy.

over the gables and dows up under the eaves. And in it I keep sunny rooms to shelter all the folks in need that my Master sends. Yours—is on the south side—corner—don't you want your supper now?"

### CHAPTER V THE HONORABLE GID.

"Now, Amanda, stick them jack-beans in the ground round side up-wards. Do you want 'em to have to turn over to sprout?" demanded Miss Lavinia, as she stood leaning on her crocheted stick over by the south side of the garden fence, directing the planting of her favorite vine that was to be trained along the pickets and over the gate. Little Miss Amanda, as usual, was doing her best to carry out exactly the behests of her older and a little more infirm sister. Miss Amanda was possessed of a certain amount of tottering nimbleness which she put at the disposal of Miss Lavinia at all times with the most cheery goodwill. Miss Amanda was of the order of little sisters who serve and Miss Lavinia belonged to the sisterhood dominant by nature and by the consent of Miss Amanda and the rest of her family.

"It's such a long row I don't know as I'll hold out to finish it, Sister

Viney, if I have to stop to finger the beans in such a way as that. But I'll try," answered the little worker, going on sticking the beans in with trembling haste.

"Let me help you, please, Miss Amanda," entreated Everett, who had come to watch the bean planting with the intention of offering aid, with also the certainty of having it refused.

"No, young man," answered Miss Lavinia promptly and decidedly. "These jack beans must be set in by a hand that knows 'em. We can't run no risks of having 'em to fall to come up. I got the seed of 'em over to Springfield when me and Mr. Robards was stationed there just before the war. Mr. Robards was always fond of flowers, and these jack beans in special. He was such a proper meek man and showed so few likings that I feel like I oughter honor this one by growing these vines in plenty as a remembrance, even if he has been dead forty-odd years."

"Was your husband a minister?" asked Everett in a voice of becoming respect to the meek Mr. Robards, though he be demised for nearly half a century.

"He was that, and a proper, saddle-bags-riding, torment-preaching circuit rider before he was made presiding elder at an astonishing early age," answered Miss Lavinia, a fading fire blazing up in her dark eyes. "He saved many a sinner in Harpeth Valley by preaching both heaven and hell in their fitten places,

"Lands alive, if here ain't Miss Viney and Miss Amanda out planting the jack beans and I ain't got down not a square foot of summer turnip greens!" exclaimed her voice as Mrs. Rucker hurried up across the yard to the garden gate. "Now I know I'm a behind-hander, for my ground's always ready, and in go the greens when you'll till her quick as the bean vines. Are you a-looking for a little job of plowing, Mr. Mark? I'd put Mr. Rucker at it, but he gaw his left ankle a twist y'ards and I can't get no kinder quiet a-setting on the back porch or maybe a-hobbling over to the store."

"Yes, I'll plow, if you don't care whether your me or plow or hame strings come out alive or no," Everett with a laugh. Miss Amanda had risen, hurried eagerly over to her favorite neighbor and held out her hand for the pan tendered her by Mr. Newsome.

"Them's your sally luns, Miss Amanda, and they are a good chance; it I do say it myself. I jest know you and Rose Mary have got on the best of it, and I'm mighty proud to have the luns handed around with all your fixings. I reckon Rose Mary is so complicated you can't hardly trust her with no supper, or such like. Have you seen him yet, Rose Mary?" she asked of Rose Mary, who had appeared at the garden gate.

"I've just come up from the milkhouse," answered Rose Mary with a laughing blush. "When did Mr. Newsome come?"

"Just now," answered Mrs. Rucker with further buster in her eyes. "And none of Solomon's lilies in all their glory were ever arrayed like one of him. You better go frill yourself out, Rose Mary, for the men ain't going to be no better off than a-cov'ring over there at the store very long."

"It will only take me a few minutes to dress," answered Rose Mary, with a continual winking of her black eye. "The Aunties are all ready for supper, and Stonie and Uncle Tucker. Mag has got everything just ready to dish up, and I'll take in the sally luns to the store at the last moment. Isn't it lovely to have company? Friends right at home you can show your liking for all the time, but you must be careful to save their hearts in their throats to give to them when they come. Mr. Mark, don't you want to—"

But before Rose Mary had begun her sentence Mr. Mark Everett, of New York City, was already sliding away across the yard with a long swing, and as he went through the front gate it somehow slipped out of his hand and closed itself with a bang. The expression of his back, as he crossed the road might have led one versed in romantics to conclude that a half-sheathed sword hung at his side and that he had two flintlocks thrust into his belt.

And over at the store he found himself in the midst of a jubilation. Mr. Gideon Newsome, of Bolivar, Tennessee, stood in the doorway, and surrounded by a throng of folks, in the doorway, and on the porch, was the entire masculine population of Stewartie.

Mr. Newsome was tall and broad and well on the way to portliness. His limbs were massive and slow of movement and his head large, with a mane of slightly greying hair flung back from a wide, unfurrowed brow. Small and big eyes, with a gleam that from crinkled heavy lids and a bulldog jaw shot out from under a fat peak of a nose. And over the broad expanse of countenance was spread a smile so sweet and deep, so rich that it gave the impression of obscuring the form of features entirely.

(Continued next week)

With me that I should man's judgment by myself, Lord.—I C

At first might appear one, when we are filled with fear. But attention to the Judge bring out the is a judgment. We stand ourselves, but it is a very by man; but Paul and carefully as he received the I ted some dr us as they the thought of God was science would den bearably pain caused would be ve We believe



# The Upward Look

## Before the Judgment Seat

With me it is a very small thing that I should be judged of you, or of man's judgment; yea, I judge not mine own self. For I know nothing by myself, yet am I not hereby justified, but he that judgeth me is the Lord.—1 Cor., 4: 3, 4.

At first thought, this subject might appear rather an uncomfortable one, as in the majority of cases when we speak of the Judgment Day we are filled with awe and sometimes fear. But we do not intend to draw attention to what is usually called the Judgment Day, but rather to bring out the thought that every day is a judgment day.

We stand continually before three judges, namely, God, the world, and ourselves. Paul says that with him it is a very small thing to be judged by man; but how many of us are like Paul and can treat public opinion as lightly as he? If all our friends conceived the idea that we had committed some dreadful deed and shunned us as they would some wild animal, the thought that the approving eye of God was upon us and a clear conscience would help to make the burden bearable; but to any of us the pain caused by their mistaken idea would be very great.

We believe it is only human nature

that we crave for sympathetic appreciation and to win the approval of good men. Yet it is possible to enjoy the favor of God and man and still be standing in a dangerous position. We are apt to value the appreciation of the world too highly. Sometimes in order to do what is right we must endure the condemnation or ridicule of the world. When such a time arrives and we are tempted to do wrong in order to retain the respect and approval of the world, then it is that we prove whether we value the smile of the Lord more or less than the smile of the world.

Then again, perhaps the praise or blame of those around us is not very sincere. They may flatter us and yet at the same time think us very selfish. Or they may blame us outwardly and still in their hearts respect us for doing what we consider right. But we may be assured at all times that the "Well done" of the Master is sincere.

We stand on trial every day, and what results are being recorded? Do we expend our energy in trying to please the world, or do we keep uppermost in our minds the thought of winning the approval of our Father in Heaven?

"We meet and mingle, we mark men's speech; We judge by a word or a fancied slight;

We give to our fellows a mere glance each, Then brand them for ever black or white.

Meanwhile God's patience is o'er us all,  
He probes for motives, He waits for years;  
No moment with Him is mean or small,  
And His scales are turned by the weight of tears." R.M.M.

## Value of Friendship

Fine as friendship is, there is nothing irrevocable about it. The bonds of friendship are not iron bonds, proof against the strongest of strains and the heaviest of assaults. A man by becoming your friend has not committed himself to all the demands which you may be pleased to make upon him. Foolish people like to test the bonds of their friendship, pulling upon them to see how much strain they will stand. When they snap, it is as if friendship itself had been proved unworthy. But the truth is that good friendships are fragile things and require as much care in handling as any other fragile and precious things. For friendship is an adventure and a romance, and in adventures it is the unexpected that happens. It is the zest of peril that makes the excitement of friendship. All that is unpleasant and unfavorable is foreign to its atmosphere; there is no place in friendship for harsh criticism or faultfinding. We will "take less" from a friend than we will from one who is indifferent to us.—Randolph S. Bourn.

## A Great Object Lesson

The man who gets the most out of life is the man who lives to learn. An old man, walking by the banks of a river, said to his grandson: "See this river, my child. It has a different interest for each of us. That man yonder thinks of it merely as a place to fish. The boys down there think of it as a swimming-pool. The man who owns the sawmill considers it a part of his workshop. Those young people in the launch think of it as a pleasure stream. The farmer finds that it enriches his fields. The cows come down to drink. The old settlers tell of a battle that was fought near the bend.

"You and I find a many-sided object lesson. You are soon to go out into the world and you will find life like this river. You will observe that every man thinks of it from his own standpoint. Some are idlers along the banks waiting for chance to bring them what they want; some row up the stream and some flow down; some refreshment, some only pleasure; some see only a hard work; and some are looking back at the past, thinking of the battles that have been fought in years gone by. But you will find it a great object lesson—a school where all the activities of men and women become lessons, and where progress is wisdom and goodness is the chief motive in all that we do."



## Try this Thirsty Flour

A very thirsty flour. Absorbs a lot of water. Because it contains so much gluten. Manitoba wheat is wonderfully rich in sturdy gluten. And, think of it, FIVE ROSES is milled exclusively from the very cream of the Manitoba wheat berries. So FIVE ROSES must be awfully thirsty, don't you see. In your mixing bowl it greedily absorbs more water. So you get more loaves than usual without using more flour. You use less. Your flour lasts longer, doesn't it? Less trips to your dealer. That's how FIVE ROSES saves money. Actually saves YOU money. Use this economical flour.

# Five Roses Flour

Not Bleached



Not Blended

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COUPON  
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## VACUUM WASHER

Price \$3.50

For the Following Reasons:

- 1-It is compressed air that does the work.
- 2-You can wash a tub of clothes in THREE minutes.
- 3-COMPRESSED AIR and SUCTION are the latest known science for perfect cleaning.
- 4-There is no wear or tear on the clothes.
- 5-It estimates all the hard work of washing.
- 6-You can rinse or blue a tub of clothes in 30 SECONDS.
- 7-One hour's work will do any ordinary family washing.
- 8-It will last for years.
- 9-Anything that can be cleaned by soap and water or gasoline can be cleaned perfectly without breaking a sweat.
- 10-THREE minutes in the suds, TWO minutes in the boiler (if you boil your clothes), 30 SECONDS in the rinse water and 30 SECONDS in the bleaching water, will wash a tub of white clothes.
- 11-Lace Curtains, Bed Comforts, Fancy Shirt Waists, Woolen Blankets, Overalls and even Horse Blankets can be washed perfectly without any wear or tear on the goods.
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- 15-You can use the machine in the boiler, thereby forcing the steam through the clothes, which loosens and whitens them.
- 16-It only costs \$3.50 and will save at least \$50.00 per year in your home by not wearing out your clothes.
- 17-The Washing Machine only weighs 14 pounds.
- 18-You can do all your DRY CLEANING with the machine. You simply use gasoline in place of water.
- 19-Because the I. X. L. Vacuum Washer is sold under a money back guarantee to wash quicker and better than any washing machine made, irrespective of price and construction.
- 20-Because if you use the coupon below, you can get one of these wonderful washers for \$1.50.

**Guaranteed** To wash a tub of clothes perfectly in 3 minutes  
Not only washes, but rinses and blues  
No rubbing or batting. Absolutely no friction  
NO SEVERE EXERTION REQUIRED

A child can do an ordinary washing and have it ready for the line in one hour.

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All charges prepaid anywhere in Canada on condition that your money is not to be refunded if the Washer does not do all that is claimed.

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### Suggestions for Ironing Day

Mrs. W. C. Palmer, N. D. A. C.

Before beginning to iron have everything in readiness—paraffin or wax, a heavy paper on which to test and clean the irons, a dish of water, and a small sponge for dampening surfaces which have become too dry to iron or need to be done over. Stand the ironing board where the light can fall directly upon it, with the ironing stand at the right and clothes basket on a chair at the left. Place a rug to stand on so the feet and limbs will not ache quite so much from the standing. The height of the ironing board should be regulated to suit the convenience of the ironer. The early part of the day is the best time to iron. It is far better to take two mornings to finish the ironing than to keep at the task after physical weariness makes it a drudgery.

Table linens should be sprinkled very damp. Bed linen and towels require very little dampening. Sprinkle dresses, waists, skirts, handkerchiefs, lace, and embroideries well. Roll each piece tight and place in clothes basket previously lined with paper or an old sheet. When the clothes are all placed in the basket, cover with a heavy cloth. Everything ironed more easily if clothes are sprinkled the night before, thus distributing the dampness evenly. In the summer time clothes will milder if allowed to stand too long before ironing. Sprinkle only as many pieces as can be easily ironed at one time.

### CHARACTERISTICS NEEDED

See that the irons as well as the range are perfectly clean before placing them on to heat. Give the iron a good steady pressure, lifting from the board as little as possible and iron the piece until finished. Take the sheets first, giving extra pressure to the hems. Towels may be ironed on the sheets and in that way the sheets are ironed with less effort, moving the sheet and dry each towel is ironed. Pillow cases may be treated in the same way. The flannels, knit underwear and stockings are better from a hygienic standpoint folded and put away unironed. Iron table linens thoroughly dry with good hot irons, using a strong pressure on the right side lengthwise and parallel with the selvage, this brings out the pattern and imparts a satiny gloss, leaving it dainty and soft. Too much ironing will yellow thin fabrics and as they dry out quickly it is necessary to iron rapidly with a moderately hot iron. Skirts and dresses are easily and quickly ironed by ironing the waist first, then the skirt, slipping the board through the skirt, taking care to have something beneath to prevent them from touching the floor. To iron a shirt waist, iron the collar and sleeves first, then the body of the waist. Press shoulder seams on the inside until dry. Hang on a coat hanger.

The secret of ironing is to iron each piece dry, especially dresses, waists and skirts, taking care that the folds, seams and tucks in each garment are dry. As each piece is ironed hang on bars or line until thoroughly dried and aired as a certain amount of moisture remains even after ironing and must be entirely removed before pressing the clothes to put away. Have plenty of coat hangers for dresses, skirts and waists. They are cheap. Half the charm of any woman's or girl's appearance lies in the perfectly maintained garment, and after it is once ironed over she should be used to fold and hang it up properly and not laid carelessly away.

Tumbler's which have contained milk should first be rinsed in cold water before washing in hot water.

# BEST WELL KNOWN SEEDS

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ANGEROUS ILLNESSES ARE DUE TO CONSTIPATION

Keep Your Health By Natural Means

It is a well-known fact among physicians that a large percentage of dangerous illnesses (Appendicitis among them) can be traced almost directly to Constipation. The majority of people do not attempt to rid themselves of Constipation until it really makes them sick. Then they attempt to do so with drugs. Drugs cannot cure Constipation. They may bring relief for a few days, but when you continue the use of drugs you find we must continue the use of them, and thus we become slaves to the drug habit.

The most natural way of removing this poisonous waste from the system is by the Internal Bath. This method is now used by over 30,000 people, and recommended by physicians everywhere. This does away entirely with all drugs—just plain ordinary water is necessary, but it is wonderfully efficient.

Mr. A. MacLean, of the Conger Lumber Co., Parry Sound, states: "I have used the J. B. L. Cascade since I received it 23 days ago with wonderful results. Before I started this treatment I could not pass one day without taking medicines, and since then I have not taken one dose and feel much better. I have been troubled with Constipation for the past 10 or 12 years, and I speak too highly of the Cascade Treatment."

Don't neglect Constipation. Don't attempt to cure Constipation and its ills by unnatural methods. Investigate Dr. Charles A. Taylor's Cascade today. Surely it is simple self justice to find out more about a system that has done much good for thousands of others. Dr. Tyrrell will be glad to send you full information and his free booklet, entitled "Why Men of Today are Only 50% Efficient." If you will address him, Charles A. Tyrrell, M.D., Room 674, 229 College St., Toronto.

## Capable Old Country Domestic

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### The O

Hattie, R.

The Grand of the Gran country, but how n stands for or where it its founder's valent the ed" and hard think men and one fore a first ing was held trons of H upon the w

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### ESTIMATE

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It seemed that a new order was sending out its

The Origin of the Grange

Hattie Robinson, Elgin Co., Ont. The Grange! Who has not heard of the Grange? Whether of city or country, the name is a familiar one, but how many who know what it stands for ever stop to think of how or where it originated and who was its founder? The idea may be prevalent that like Topsy, it just grew and so it did, but it took the hard thinking and hard work of seven and one woman for two years before a first subordinate Grange meeting was held, and the new order, Patrons of Husbandry, was launched upon the world.

In January 1866, Oliver H. Kelley, clerk in the department at Washington, was sent by the Commissioner of Agriculture to the Southern States to report on the condition of the people. Mr. Kelley being of New England birth and coming from a Minnesota farm to take his position was grieved at the state of affairs in the parts visited and the emity between the agriculturalists of the North and South, caused by the Civil War. A plan was formulated in his mind for the union of the farmers of all sections for protecting their interests, educating and elevating their minds and restoring friendly feelings amongst all classes. This organization he felt should have the fraternal bond of secrecy which is effective, as his connection with the Masonic order showed him the power of associations of this kind.

ENTITLED TO MUCH CREDIT

On his return he spoke of his impressions to John Trimble of the Treasury Department in Washington and coming to Boston to visit his niece, Miss Carrie A. Hall, talked over on the matter. She was quite enthusiastic and suggested that woman be given full and equal right of membership in the order. This lady afterwards became assistant secretary of the National Grange and edited the same for several years. She was the official one of the order, which has never been superseded. Mr. Kelley in writing of her says: "She is entitled to as much credit as myself for I assure you that had it not been for her I should have given up the work half a dozen times during the first four years. I used to get woefully discouraged very often."

During the summer of 1867, Wm. M. Ireland, clerk of the Postoffice Department; J. R. Thompson of the Treasury, and Wm. Saunders, (afterwards noted as a specialist in experimenting with plants), their heads of the Government gardens and grounds, held meetings in his office and outlined the degrees and prepared the beautiful ritual of the patrons. There were to be four degrees representing the seasons with appropriate signs, passwords and lectures, suitable for the tillers of the soil. With the assistance of friends they completed a ritual for both men and women which may have said "is unsurpassed in the English language for originality of thought, purity of sentiment and beauty of diction." A constitution was arranged and all was ready but the name. A great many were suggested, such as, Independent Farmers, Knights of the Plow, Knights of the Sickle, etc., but to Anson Bartlett of Ohio, belongs the honor of sending the name eventually chosen, for he suggested League of Husbandry, or Patrons of Industry. These were combined and henceforth Patrons of Husbandry became the watchword of the order. He also advocated dropping the name lodge and substituting grange, which means "a perfect farm home."

It is deemed that in every respect the new order was to be unique, for in sending out its declaration of objects

it was called The Declaration of Purpose and the presiding officer is known as The Worthy Master in place of the common name of President.

FATIGUED WORKERS On the 14th day of December, 1867, the founders met in Mr. Saunders' office and the National Grange of Patrons of Husbandry became a living agent of power; in a few years to be felt from the length and breadth of the land. The officers were: Wm. Saunders, Master; J. R. Thompson, Lecturer; W. M. Ireland, Treasurer, and O. H. Kelley, Secretary. This was the first meeting, but not until Jan. 8th, 1876, did a delegate body meet, although during the intervening years the founders regularly met and transacted the business. It is said that at one of these meetings the Master and Secretary were the only ones present. Nevertheless the Master's address was read and printed in the papers of the country. This is surely an incentive to all to persevere when working for the right.

The first subordinate Grange as a school of instruction was organized in Washington, D. C., 8th, 1868, with W. M. Ireland, Master, and O. H. Kelley, No. 1. Such was Mr. Kelley's faith that he gave up his position and in April started out on his missionary work to which the rest of his life was devoted. He started a Grange in Harrisburg, April 4th, but the first charter issued by the National Grange was to Tredoni in New York state, organized by him April 16th, 1868. This Grange made remarkable progress and celebrated its 25th anniversary in 1893 with great rejoicing. They then had a membership of 250 and showed every sign of prosperity.

GROWTH GRADUAL BUT EFFECTIVE

From Tredoni Mr. Kelley went to his old home in Minnesota. In Feb., 1869, the first state Grange was formed with 11 subordinate granges. The growth was rapid and gradual, and in 1876 The National Grange was incorporated with headquarters in Louisville, Kentucky. At the end of eight years of steady work, Secretary Kelley said: "In the history of our organization our Order is the greatest achievement of modern times. We have issued 24,200 charters and have 3,000 deputies at work, and the total membership is 762,263."

The largest number of Granges organized in one year was in 1874 when 11,091 came into existence. What a triumph for the founders of this noble order, many of whom lived to a glorious old age and enjoyed the fruits of their ideal and became satisfied of knowing that they had not toiled in vain. "Eato Perpetua" was the motto adopted at its inception and no one will question the fact that its principles and influence will remain as long as "seedtime and harvest shall not fail."

An Original Meat-Hanger

To make a good meat-hanger for use in smoking meat, take a buggy wheel, with axle and nut, and have a blacksmith cut off to a suitable length, to fit where it is to hang; splitting it, to fit around and forming two hooks to hang by, as one hook will not hold the hanger steady.

The wheel should next be reinforced by passing double strands of wire from at least four places on the felly, crossing on the hub and about the axle, afterward twisting the wires up tight. If it is not wired, the wheel may collapse under a heavy load of meat, and thus it should bear up without any danger about five hundred pounds of meat.

Having the fire a little to one side of the wheel, the meat may be readily rotated as desired, smoking it more or less as needed.—Ex.

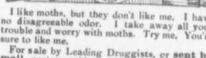
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Farm Laborers will again be brought out this year by our Immigration Department.

Also Boys and Domestic Servants

We are making a special effort this year in country districts and will have the best class of immigrants. We seek desirable places for you.

Apply early for application form to The Salvation Army Immigration Dept. TORONTO, Ont.



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All "ARLINGTON COLLARS" are good, but our CHALLENGE BRAND is the best

THIS WASHER MUST PAY FOR ITSELF

A MAN tried to sell me a horse. He said it was a fine horse and had nothing the matter with it except a fine horse, but, I didn't know a nuthin' 'bout horses much. And I didn't like the man very well.

So I told him I wanted to try the horse for a month. He said he'd let me have the horse for a month, but I'd have to pay him first, and I'd give him the horse back at the end of the month. Well, I didn't like that.

I was afraid the horse was not "all right" and that I might have to waste my money if I once parted with it. So I didn't buy the horse, although I thought it was a fine horse. Now, this set me thinking.

You see I make Washing Machines—the "1000 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it. But I never knew, except they wouldn't write and tell me. You see I sell my Washing Machines by mail. I want to sell a million that way. So, thought I, it is only fair to let me know if you have any Machines for a month, before they pay for them. I wanted to try the horse.

Now, I know that our "1000 Gravity" Washer will do all kinds of washing, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in six minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1000 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fry the edges, or break buttons, or give away all other machines do.

It just drives soap water clear through the fibres of the clothes like a force pump might. So, said I to myself, I will do with my "1000 Gravity" Washer. I will have the man to do with the horse. Only I won't wait for people to ask me. I'll offer it myself.

Let me send you a "1000 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freightage. Surely that is fair enough, isn't it?

Doesn't it prove that the "1000 Gravity" Washer will pay for itself? I'll send you one if you will. I'll save its whole cost in a few minutes and wear and tear on the machine. And then it will save 50 to 75 cents a week over that in wash-water and soap. I'll keep the machine after the month's trial, I'll let you pay for it out of my own pocket. If it saves you 60 cents a week, send me your money a week later. I'll take that cheerfully, and I'll wait for my money until the machine has paid for itself. Drop me a line to-day, and let me send you a book about the "1000 Gravity" Washer. I'll send clothes me personally.

O. T. MORRIS, Manager, 1500 Washer Co., 387 Yonge St., Toronto, Ont.

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# THE PLAYTIME WASHER



Means a saving of money to the farmer and his wife. The time and energy spent over the wash tub could be employed more profitably in some other way. It might mean more and better butter, poultry, fruit and eggs. The "Playtime" is adapted to either hand or power operation. In either case it eliminates the HARD work of washing and saves wear and tear on the clothes.

Get your dealer to show you the clothes. Ask your dealer to show you the clothes. Ask your dealer to show you the clothes.

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To ALBERTA AND SASKATCHEWAN Every TUESDAY until April 30th inclusive, from stations in Ontario, Port Hope, Peterboro and West, at very low rates.

Through coaches and Pullman Tourist Sleeping cars are operated to WINNIPEG without change, leaving Toronto 11:00 p. m. via Chicago and St. Paul on above dates.

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Buy the script name of Hartshorn on label. Get 'Improved,' no ticks required. Wood Rollers. Tin Rollers.

HERE IT IS! and 40c. This is the best shade roller on the market. It is made of the best material and is the only one that will not warp or break. It is the only one that will not warp or break. It is the only one that will not warp or break.

AGENTS WANTED. E. S. BROWN, Water St. Can.

AGENTS WANTED. E. S. BROWN, Water St. Can.

AGENTS WANTED. E. S. BROWN, Water St. Can.

### What a Smile is Worth

The thing that goes the farthest to ward making life worth while, That costs the least and does the most is just a pleasant smile That bubbles from a heart that loves its fellow men, That drives away the clouds of gloom and brings the sun again. It's full of worth and goodness too, with many kindness bent— It's worth a million dollars and it doesn't cost a cent.

There is no room for sadness when you see a cheery smile, It always has the same good look— It's craver out of style, It nerves us up to try again when failure makes us blue, The dimples of encouragement are good for me and you It pays the highest interest for it's merely lent— It's worth a million dollars and it doesn't cost a cent.

A smile comes very easy—you can wrinkle up with cheer, A hundred times before you squeeze out a soggy tear, It ripples out moreover, to the heart-string that will tug, And always leaves an echo that is very like a hug, So smile away. Folks understand what by a smile is meant— It's worth a million dollars and it doesn't cost a cent.

### Give the Boy a Chance

Mrs. C. E. Robinson.

In some farms, one of the neglected things is the boy. It is made to do his share of the farm work and then run errands and do all the odd jobs about the place. Of course, this doesn't hurt a healthy, active boy, but with the unappreciation, the criticism, the fault-finding that the other members of the family sometimes give him does.

In fixing up the house the boy's room is nearly always the last to be considered. Any old corner that will hold a bed and a chair is good enough. He is not around the house much anyway. This isn't fair. A boy likes neat, convenient things as well as a girl, and he doesn't like the same things that girls do, a room can be arranged to his taste as near as the purse will allow.

A boy doesn't want cushions and ruffles, but a large, honey room furniture, bright and attractively. An iron bed, a dresser, a neat cabinet that fits into the wall to hold his books, fishing tackle or anything he likes and uses. The feeling that he is free to share his room with his boy companions occasionally will have a tendency to keep him from spending his evenings away from home.

### FEELING OF OWNERSHIP

Another thing, give the boy something he can call his own if it is nothing but a chicken. That feeling of ownership on the farm creates a greater interest in all things on the farm. It is the lack of interest that makes the boy want to leave. I know a smart, industrious boy who wanted one acre of ground to plant corn on last spring. Some of his schoolmates raised the greatest number of bushels. He asked his father for the acre. The father angrily replied that he wasn't going to put all the fertilizer and a year's work on one acre of ground. All such a boy is blamed foolishness." That boy has worked this year as usual, but he hasn't seemed to take the interest that he did heretofore. Nine times out of 10 it lies in the parent's power to keep the boy on the farm. None but parents can solve the problem.—Farmer's Review.

### The Sewing Room

Patterns 10 cents each. Order by mail, or send in for children give age; for adults, give bust measure for waists and waist measure for bodices. Address all orders to the Pattern Department.

### GIRL'S NORFOLK DRESS, 783



The demand for a never-ceasing one fashionable model is sure to find a welcome. The one illustrated combines a number of smart and attractive features. The material is a check of blue serge with white and with braid, but it would be equally combined with blue serge with collar of white or of white. This pattern is cut in sizes for girls from 6 to 30 years of age.

### FANCY BLOUSE, 774



Accordion plating is among the smartest features of the season. This model shows in a way and it is exceedingly charming. The blouse is made over a fitted lining that holds the portions of the main portion of the blouse consisting of only the front and back portions with simple, one-piece sleeves. The lining fabric is made to contrast with material to give the vest effect. The pattern is cut in sizes for girls and corresponding cuffs are pretty features.

### TUCKED KIMONO, 785



Pretty kimono and house dresses always appeal to dainty women. The charming kimono that can be belted at the high waist in Empire effect and become adapted to morning wear or can be left free and used for negligee wear. The pretty flowered cotton crepes and material of the kind are excellent. For the medium size the kimono will require 5 1/2 yards of material, 2 1/2 yards 3/4, or 2 1/2 yards 44, with 1 1/2 yard 2 inch. This pattern is cut in size 34 and 36 inches bust measure.

### SEMI-PRINCESS DRESS FOR MISS AND SMALL WOMEN, 781



One-piece or semi-princess dresses, both for young girls and for women, continue to hold their own. The model here is exceedingly smart and exceedingly simple. It consists of a three-piece skirt with panel at the front and a simple blouse with a vest that meets the waist of the skirt and gives a continuous effect. For the 16 year size the dress will require 4 1/2 yards of material, 2 3/4 3/4 yards 44, or 3 1/2 yards 44, with 1 1/2 yards 2 inch wide for collar, vest and panel. This pattern is cut in sizes for misses or 15 and 18 years, and is adapted to small women.

### Any little girl can do the chores with MAXWELL'S Favorite Chairs.

It makes the smoothest, richest, most delicious butter you ever tasted. The roller bearings—on hand and foot levers—make churning an easy task, even for a child. All sizes from \$4 to \$30.00. Write for catalogue if your dealer does not handle this chair. Maxwell's "Champion" Washer.

David Maxwell & Sons, St. Mary's, Ont.



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**BRUCE'S GARDEN FEEDING BEET**—The most valuable Field Root on the market; combines the rich qualities of the Sugar Beet with the long-keeping, large size and heavy coloring qualities of the Mangel. We offer two colors, WHITE and BEAN. 1/2 lb. 15c, 1/2 lb. 25c, 1 lb. 50c, postpaid.

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Here is the op- nest, a leading

Having had Douglas' Egyptian I feel it my duty

"Our cattle were done, so had to be would lose the the Liniment but four hours we trouble.

"When any other home or stable always called for give instant relief. I hope this is the those whose ca- caked udder.

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The wonderful results obtained by the large dairies and dairymen around Toronto by feeding our Pro-fat dairy feed has led this company after many requests from dairymen, to add 25 pounds of pure Cane Molasses to each 75 pounds of Pro-fat. The result being a molasses meal without an equal, as the following guaranteed analysis will show—Protein 20%, Fat 5%, Fibre 13%. Compare this with other molasses meals offered to the public and it will leave no doubt in your mind as to the truth of our claim. After a test at the T. Eaton Company's Farm, Georgetown, and other Dairy Centres, we have decided (in order to introduce this meal) to make the following proposition to Dairymen throughout the province:

## 30 Days' Trial

We will ship on thirty days' trial, freight paid, one ton of Pro-fat Molasses Meal to any responsible dairyman in the Province of Ontario with an absolute guarantee (fed pound for pound in place of other meal or concentrates) to produce more and richer milk for less money. If it fails to do this there will be no charge for the meal. If it is all we claim for it, the charge will be \$1.40 per hundred, or \$28.00 for the ton. Dairymen who have recognized the value of Cane Molasses for dairy herds have an opportunity here of trying a genuine molasses meal of real merit without running any risk whatever. It is the only molasses meal endorsed by the authorities of the O. A. College, Guelph. Send your orders in or write to us for more particulars if you have any doubt about this offer. This meal is equally good for horses; no dairyman can afford to be without it. Write for list of dairymen who have already used it. We also have this meal for Calves and Hogs.

## Feed Pro-fat Molasses Meal and Watch the Milk Flow Increase

THE FARMERS FEED CO., LIMITED

DEPT. A., 108 Don Esplanade

TORONTO, ONT.

# MARKET REVIEW AND FORECAST

Toronto, Monday, March 31.—Changeable weather is never favorable to trade of any kind and the weather recently has been very changeable. Wholesale dealers report that they have had a few orders in the last week, and country retail trade is slow. On local produce markets there have been few changes of note. The bottom seems to have been reached in wheat. Cattle are in annual supply and cleaned up readily at steady prices. Dairy produce remains firm. We would again stress the attentive attention to saving surplus poultry to the advisability of marketing at this season. Food particularly, now that dressed poultry were still for the usual season quotations, are still high.

From many sources there are indications that money will not be as tight in future as it has been for some months. Bankers still excuse themselves from making loans by referring to the tightness of the money market, but this excuse is now almost a thing of the past.

Wheat quotations have declined but slightly from last week. Locally the market is easy as demand from foreign sources has not been as good as formerly, and millers are supplying the market. The slow demand for flour and lower prices for mill feeds also tend to reduce wheat prices. The Canadian Trade Bulletin expresses editorially the opinion that the world's supply has been over-estimated, and that the bottom has now been reached in prices for the 1913 crop. Quotations are as follows: No. 1 Northern, No. 1, 81 1/2c; No. 2, 80c; No. 3, 79c; No. 4, 78c; No. 5, 77c; No. 6, 76c; No. 7, 75c; No. 8, 74c; No. 9, 73c; No. 10, 72c; No. 11, 71c; No. 12, 70c; No. 13, 69c; No. 14, 68c; No. 15, 67c; No. 16, 66c; No. 17, 65c; No. 18, 64c; No. 19, 63c; No. 20, 62c; No. 21, 61c; No. 22, 60c; No. 23, 59c; No. 24, 58c; No. 25, 57c; No. 26, 56c; No. 27, 55c; No. 28, 54c; No. 29, 53c; No. 30, 52c; No. 31, 51c; No. 32, 50c; No. 33, 49c; No. 34, 48c; No. 35, 47c; No. 36, 46c; No. 37, 45c; No. 38, 44c; No. 39, 43c; No. 40, 42c; No. 41, 41c; No. 42, 40c; No. 43, 39c; No. 44, 38c; No. 45, 37c; No. 46, 36c; No. 47, 35c; No. 48, 34c; No. 49, 33c; No. 50, 32c; No. 51, 31c; No. 52, 30c; No. 53, 29c; No. 54, 28c; No. 55, 27c; No. 56, 26c; No. 57, 25c; No. 58, 24c; No. 59, 23c; No. 60, 22c; No. 61, 21c; No. 62, 20c; No. 63, 19c; No. 64, 18c; No. 65, 17c; No. 66, 16c; No. 67, 15c; No. 68, 14c; No. 69, 13c; No. 70, 12c; No. 71, 11c; No. 72, 10c; No. 73, 9c; No. 74, 8c; No. 75, 7c; 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A number of barns in the surrounding counties were completely or partly demolished. The fires were thrown right off the houses, a number having to use coal oil stoves until the fires can be rebuilt. The towns of Montford, Collingwood, and Barrie, we hear much damage has been done. A number are making maple syrup; the price, we understand, is about \$1.50 a gallon. Butter is worth 22 to 23 cents a pound. Several car loads of horses have been shipped to the west, the prices varying according to the quality. A number are moving to the east, as well as horses, cow, and in some cases even pigs.

MIDDLESEX CO. ONT.

LAMBETH March 26.—On Good Friday we had a terrific windstorm, which did considerable damage to fences, roofs, chimneys, trees, etc. A very heavy down-pour of rain followed on the quickly after, and was not much enjoyed by those whose buildings were having wintered well, so wheat and clover have wintered well, and give promise of an abundant crop. Auction sales have been numerous lately, and all offerings brought high prices. A number of our people are leaving the West, but others are appearing to step into their places.—R. O. APPIN, March 26.—The number of the orchards in this locality are being more thorough pruning and spraying than formerly. The new formed associations are in earnest as to producing good fruit, and if the crop is successfully mar-

hops in sympathy with the strength in the west. Rather small supplies are coming forward for which there is a good demand from purchasers, and trade was active with sales of selected lots at \$10.00 to \$12.00 a cwt., with a good off. There was an easier feeling in the market for dressed hogs and packers have reduced their prices 25c owing to the falling off in the demand this week and sales of abattoir fresh-killed stock were made to-day at \$14.50 to \$14.75.

EXPORT BUTTER AND CHEESE

Montreal, Saturday, March 29.—There is nothing new to say about cheese—the market here is quiet and steady but in England is firm, with prices well maintained. Butter is strong and active. Finest qualities are in demand, and are quoted at 28c to 30c a pound. Receipts will increase steadily from now on.

ACCURACY OF HOLSTEIN RECORDS

Malcolm H. Gardner, DeLam, Wis. The mission of an improved dairy breed is to increase the productive capacity of the dairy herds of the country. This may be accomplished directly by using pure-bred stock, and indirectly by grading up production, and indirectly by grading up the common herds to greater production by the use of pure-bred stock. To conserve purity of blood, pedigree registers are used for the improved breeds; no animal being eligible to registration whose sire and dam are not recorded. Advanc-

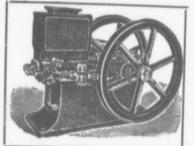
**Peerless**  
**Guaranteed Fencing**

Strongly made and closely spaced—making it a complete barrier against large animals as well as small poultry. Top and bottom wires No. 9—intermediates No. 12 wire—made by the Open Heath process which time and other tests have proven to be the best material made for the manufacture of wire fencing. Send for literature. Ask about our farm and ornamental fencing. Agents nearly everywhere. Live agents wanted in unassigned territory.

**The Banwell-Hoaxie Wire Fence Co., Ltd.**  
Winnipeg, Man., Hamilton, Ont.

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Our "red circle" folder explains the wonderful "Monarch" farm engine, part by part. This engine will save, pump, grind, run cream separator, cut silage. Move it from place to place. Every part made by experts, and made to last. See our folder.



Send a Post-Card to-day for the "red circle" folder and prices and terms on 15; to 35 h.p. sizes.

CANADIAN ENGINES Limited, DUNVILLE, ONT.

Sole Selling Agents for Eastern Canada  
THE FROST & WOOD CO., Limited, 13 SMITH'S FALLS, ONT.  
Montreal, Que., St. John, N.B.

**Send us \$1.00 Hillhurst Holsteins**

Receive by return mail two dresses for little girls, age 1 to 8; age 10 and 12, 75c each; four plain colored cambric, 10c; red, cream and navy; beautiful plaid made, just as pictured. Add 10c for postage.

STANDARD GARMENT CO., LONDON, ONT.

This spring's calves, from heavy producing dams, sired by the son of Lulu Glazier, 26 7/8 litter in 7 days. Express charges paid. Also Milk Cows. Write for particulars and prices.  
M. C. WYMAN, CHUTE A BLOUDEAU, ONT.

The Home of One of Nova Scotia's Best Herds of Black and Whites

The Holsteins owned by Samuel Dickie and Son, Colchester Co., N.S., have won more championships in the dairy test at the Amherst Winter Fair than have registered of any other herd in Maritime Canada. Within a few miles of Mr. Dickie's farms, here illustrated, are several herds of pure-bred dairy cattle, the influence down by the sea, and pure-bred men are sharing in the general prosperity of the industry.

—Photo by an editor of Farm and Dairy.

lated in 1913 the apple industry will receive a new impetus. Hogs are on top and as to prices, and the farmers who are out are now trying to get in. The fluctuations in prices scarcely make for stability in production.—C. M. M.

NIPISSING CO. ONT.

COCHRANE, March 25.—We are still in the depth of winter, with six feet of snow in the open, and trains snowed up daily. All lumbering and hauling operations are at a standstill; only the main roads recent heavy falls are open. Due to the outlook for summer is good. Government roads and railway contractors will find employment for all. The line from Cochrane to James Bay can be pushed forward at once. Prices as follows: Potatoes, \$1.15; cran, \$1.00; oats, \$1.90 per sack; hay, No. 1, \$20; eggs, fresh, 30c; new laid, 50c.—E. E. S.

MARKET REVIEW AND FORECAST (Continued from page 24)

MONTREAL HOG MARKET

Montreal, Saturday, March 29.—A firm feeling prevailed in the market for live

Breeder's Directory

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

**YORKSHIRE PIGS**, all ages, either sex. Choice Young Boars, fit for service. Also pig—H. C. Bonfield, Woodstock, Ont.

**FOR SALE**—Sons of King Farnie See's Chubside, from R. O. P. Also three Clyde Fillees and 2 Bullions. Rearings: E. M. Holtby, Manchester, Ont.

**FOR TANKWORTH SWINE**—Write John W. Todd, Corvath, Ont. R. E. P. F.

**HOLSTEINS**—Young stock for sale. Sired by Imperial Pauline De Koo, whose 15 nearest dams average 23.3 lbs. butter in 7 days.—R. W. Walker, Utica, Ont.

ed registry rests wholly upon merit; the animal must prove itself worthy before it can be accepted. All advanced registry animals were first entered in the pedigree registers to guarantee purity of blood, and then advanced to a higher register upon proving that they were worthy of advancement. Cows are admitted to such registration on their own performance; bulls, on the performance of their daughters. The test record is to the horse; provided the test record is well substantiated, a test record may be worth much or nothing, all depending on the confidence of the public in its authentication.

The Holstein-Friesian Association cannot assure the purity of its tests in every one of the rules that may show weak men as are appointed and represent several State Agricultural Colleges, of the what are known as "district" and "high" schools have offered to furnish supervision. Certain district agricultural schools would doubt furnish competent men, and often it would be to the advantage of breeders to have men from state agricultural colleges appointed. If any superintendent is not accredited to him as competent by the boards of the district schools.

If the district schools in any state were allowed to directly appoint superintendents of like grade in other states would be to allow the same privileges. As Superintendent I find it no easy matter to maintain a uniform system of conducting tests in a uniform system of conducting this work; if instead of the forty state officers now in charge there were one hundred or more, the difficulties would be increased. State officers who have long been in charge of this work realize its importance—realize that hundreds of thousands of dollars in values are based on these tests. When changes occur and inexperienced officers are placed in charge, it is necessary to press upon them the great responsibility that is theirs.

2 Pure Bred Pigs

and \$6.00 Cash

Earned in Two Weeks

By a Boy of 12



These pigs are worth many dollars to him now,—the experience has taught him valuable salesmanship,—the interest of owning pure bred stock will influence his whole life.

Your Boy can do the same

He can have Tamworth, Yorkshire or Berkshire, of either sex. Over 200 men, boys and girls have secured pigs since we made this offer of

**A Pure Bred Pig**  
Free for only 9 new subscriptions for **Farm and Dairy**  
Write for details and supplies

FARM AND DAIRY, Peterboro, Ont.  
I will try to secure 9 new subscriptions to earn a pure-bred pig. Please send me sample copies, receipts and order blanks. Signed,

P. O. .... Prov. ....

# A CREAM SEPARATOR VALUE

A PERFECT MACHINE  
GUARANTEED TO YOU  
IN EVERY RESPECT

NEVER EQUALLED BEFORE

BY  
THE T. EATON CO LIMITED



2990

CAPACITY 300  
TO 350 POUNDS  
PER HOUR

These Separators  
skim very close, are  
strongly built, and  
are the best and  
most modern. Note  
the sizes and prices.

FREIGHT  
PAID TO  
YOUR  
STATION IN  
ONTARIO

The frame of our new Separator encloses every part of gearing. The bowl casing is a part of this solid one-piece frame, and it is impossible for it to get racked out of true. The base is heavy, and cast in one piece. It is just high enough to lift the frame off the floor, and open enough to allow of sweeping underneath. The top cap lifts off, giving access to the top drive gear. The door in the frame just below the bowl casing opens to expose the worm and lower gear wheel, thus all parts are readily accessible, yet entirely enclosed, so that no dust or dirt of any kind can get to the bearings, nor can fingers or clothing be caught in any exposed gearing. The frame is low. The top of the supply tank is only 34 inches from the floor—just waist high. This allows milk to be poured into it without high lifting, and makes it convenient to use the supply tank for washing the skimming device in. There are no protruding shelves, as your pails can be set on floor safe and solid. The crank handle is just the right height, where your hands grasp it naturally without bending low or reaching. The design of the frame is graceful, and the finish, a rich red, gives it a handsome and distinguished appearance, in keeping with its mechanical excellence.

## WORKS PERFECTLY---WILL SAVE YOU DOLLARS

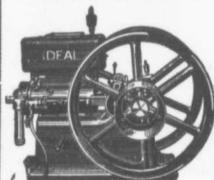
GEARINGS are all made of the best-known materials, accurately and perfectly cut. There are absolutely no frail parts or intricate intermediate gears to break or get out of order. There is not an interval of lost motion between the teeth of gear, thus insuring steady motion without gear friction. **THE RATCHET**—When you stop turning the handle everything stops turning but the bowl and its directly connected parts. Our ratchet is situated under the spin gear at the top of the shaft. It is positive in its action. **THE PATENT NECK BEARING** is made flexible by means of six finely tempered springs, which are easily adjusted by hand. There is nothing about it to get out of order. **THE BOWL** is made seamless. It is one piece, of Shelby steel. **THE SUPPLY TANK**—This is seamless, is thoroughly retinned, self-draining and round. It has no corners to catch dirt. **CLEANING**—The skimming device is easily cleaned. The discs slip apart on the rack, so that in washing there is not a speck of surface that does not come in contact with the water. We guarantee it.

Number.	Capacity.	Delivered in Ontario	Delivered in Quebec, Maritime Provinces.
70-320. ....	300 to 350 lbs. of milk per hour	29.90	31.25
70-321. ....	500 to 550 lbs. of milk per hour	38.75	38.75
70-322. ....	700 to 750 lbs. of milk per hour	46.00	46.00
70-323. ....	850 to 900 lbs. of milk per hour	49.50	49.50

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11 to 50 H.P.  
Stationary Mounted and Traction



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Saw Frames, Pumps, Tanks, Etc.

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KA-LOR-OID (colored RU-BER-OID),  
in Red and Green, makes very handsome  
roofs which never lose their color.

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All kinds of live stock insurance transacted.

the Breeding Season as the horse might die while being on the road. Do not take any chances by insuring with others, insure with us.

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The insurance premium represents only a small proportion of the service fees earned. Better risk the loss of the premium than the purchase price of your beast if it dies without insurance.

Better have and not need than need and not have.

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