

Issued Each Week—Only One Dollar A Year

VOL. XXXII.

NUMBER 18

FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

MAY 1

1913



SPRING WORK PROCEEDS APACE WHEN OUTFITS SUCH AS THIS ARE IN ACTION

"With help as scarce as it is how can we work our land well and still get crops in the ground at the right time?" This query, which many a farmer has asked of himself in the last few weeks, was recently asked of J. H. Grisdale, Director of Dominion Experimental Farms. "Buy big implements, use lots of horse power and then the man of to-day will do twice the work that he did with the old, narrow working machinery," answered Mr. Grisdale. In the illustration here we see how a practical farmer, Mr. W. Young, Huron Co., Ont., is working on the lines suggested by Mr. Grisdale. There is "something doin'" in this field.

DEVOTED TO
BETTER FARMING AND
CANADIAN COUNTRY LIFE

SHALL WE GO BACK TO THE FAT HOG?

J. A. Macdonald, Carleton Co., Ont.

THE continued prosperity of the swine industry cannot be maintained by the efforts of the farmers themselves. As the industry in the early days required and received the substantial support of the packers of that time it still requires, in their part, active cooperation. This in the last few years, the packers have failed to give and, as a result, our export bacon industry is falling off at an alarming rate.

In 1908 Canada exported 95,945,099 pounds of pork products, while in the same year we imported 10,224,413 pounds, or, in other words, we exported that year five and three-quarters times as much as we imported. In the nine months of 1911, after April 1, our exports were 48,446,575 pounds as against 13,165,786 pounds imported.

These figures show that we exported three and one-half times as much as we imported. At this rate Canada will soon not be raising enough pork for her own requirements.

THE BACON HOG CRITICISED
In our efforts to please and satisfy the packers we have developed throughout Canada the lean, fine grained "Singer" that is a hard feeder and an unprofitable hog compared to the old-fashioned thick fat. And what thanks or return are we getting from the packers for doing away with the old-fashioned easy-feeder for this slab-sided, lean, bacon hog? The systems of buying, on the part of the packers, do not tend to stimulate the production and breeding of this bacon hog. They pay no premium on this so-called bacon hog over the lard hog.

While packers, like other business men, cannot be expected to conduct their business at a loss, it would seem to be wise on their part not to take the advantage of liberal supplies which they do at present, to make an undue profit, a policy which cannot but result in discouraging hog-raisers who would like to continue in the industry, but find it unprofitable to do so. Such a policy creates a condition that is unprofitable to the producer as well as a hardship to the consumer, to say nothing of the partial idleness which at times it brings about in the packing industry.

PACKERS PAST AND PRESENT
The pioneer packers in Canada showed a generous spirit towards the industry. The packers of the present day have sought only their own immediate interests, and in looking out for these, have undoubtedly underestimated the intelligence of the Canadian farmer.

The pioneer packers did everything to encourage breeding the hog they wanted, and most of them made special importations of these hogs distributing them to farmers at low cost. For the progeny of these hogs they gave discriminatory prices. The hogs on sale were classified, and the bacon type, from their standpoint, fetched one-half cent to three-quarter cent above the old-fashioned thick fat. Not so today. There is no classification. The rough, thick fat hog, if he is but of the required weight, fetches as much as the "lean bacon type."

SHALL WE RETURN TO FAT HOG?
Why, then, should farmers continue to breed the bacon hog, as represented by our Improved Yorkshires and Tamworths? Every feeder knows that those hogs are harder to feed than those types and breeds of hogs of 20 years ago. Twenty years ago we had no "Improved Yorkshires" nor "Tamworths." We had a breed of "Yorkshires" but these were of an entirely different type and conformation to the Improved Yorkshires of today. They were not slab-sided,

tall, narrow-backed, light-banded creatures as are those of today. The sows and boars did not grow to the enormous size of the present day Yorkshire.

Then we had the easy-kept, easy-fed Berkshire. While we still have a number of these fine blacks, as these numbers are not in proportion to the others for the reason that the packers do not encourage their breeding. Breeders have endeavored to breed a type of Berkshire that would meet the requirements of the packer and, in doing, have ruined, in a measure, the inherent qualities of this fine breed. Chester Whites used to be a common breeder years ago, also Essex. Few of these are bred today. These were easy feeders, did not grow to maturity to an enormous size and were profitable hogs.

EXPERIMENTAL EVIDENCE OBTAINED
The experimental stations have worked in cooperation with the packers against the direct interest of the hog breeder in the conducting of the feeding tests. These records show that Tamworths and Improved Yorkshires were as cheaply raised, Berkshires, Chester Whites, Duroc-Jersey and Essex. Any farmer who has fed hogs of the various breeds knows different. No farmer is able to feed his hogs in the manner of the stations. Under ideal conditions, the Duroc-Jersey and Improved Yorkshire and Tamworth will make gains as cheap as the Berkshire, Chester White, Duroc-Jersey, and other fat type, but how many farmers can have the ideal conditions which are required to obtain at the Experimental Stations? Very few.

The farmers of Canada threw away and "cashed into the fire," as it were their good old profitable breeds of hogs, and adopted instead the improved Yorkshire and Tamworth, expecting to reap a big reward. It resulted in a boomerang for the farmer. A farmer should not expect upon to maintain a big sow weight, 500 to 600 pounds the year round, produce pigs to weigh 200 pounds each, when a smaller animal can do the work as well and at a much less cost of maintenance.

GO BACK TWENTY YEARS
The moral for farmers, then, is to discard those bacon breeds, as the improved Yorkshires and Tamworths and return to the breeds of 20 years ago. It cannot injure our industry, because our export trade is falling away by "leaps and bounds" anyway.

If the packers, however, wish farmers to raise these bacon breeds they must be prepared to pay a premium as they used to do in the pioneer days. It is up to the packer if the breeds of hard-feeders which are mostly pork, are to remain.

Why Drill Seeders are Best

J. H. Grisdale, B. Agr., Ottawa, Ont.
Seeding is now rarely done by hand. It is, however, in too many districts still done broadcast, that is, what is known as broadcast seeding. Such seeders are not nearly so satisfactory as drill seeders. Much of it is inefficiently covered, while other part is buried too deeply. Consequently it comes up unevenly, unevenly, ripens unevenly, and the loss is thus considerable loss at harvesting, to say nothing of the seed being injured by being buried too deeply or by being insufficiently covered.

The hoe drill and the single disc are the best seeders, and of these, I believe the single disc is to be the best.

Issued Each Week

Vol. XXXII.

HOW THE FARMER

Can Their Methods be Improved

"WE in America

end of farm land have been telling agricultural education. Many speakers at the farming methods are and that if we worry about interest in agriculture in the country can first in agriculture followed as words did Prof. McP. Agricultural College, question of farm consideration on the Conference on Market at Chicago recently, American agriculture, Farming is becoming a business. While away the forests themselves. The most of were made at home, of south shop. Their need, however, the average investment of thousands of the pioneer farmer's credit record even greater proportion farmer anywhere who other found it expedient what is the use of improvements of one kind or another is so high part of the financial improvements made.

HIGH INTEREST
Now, for instance, Canadian West hope that they must pay 12 per cent money that they must rate is not always so random less than eight per cent would the farmer borrow money on such 10 years of annual payment of the principal and both principal and terms on which European cooperative credit union and some method of American conditions was the subject of discussion by the present at the Conference Herbert Myrick, of New York farm papers and books on rural cooperation is a picture of what the American farmer that through a cooperative German land banks, a debt could be paid

A Typical Recommendation

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Vol. XXXII.

FOR WEEK ENDING MAY 1, 1913

No. 18

HOW THE FARMERS OF EUROPE SECURE MONEY AT A LOW RATE OF INTEREST

Can Their Methods be Adopted by the Farmers of America? This Question Discussed at the Great Conference at Chicago, at which Farm and Dairy was the Only Farm Paper in Eastern Canada Represented.

WE in America have started at the wrong end of farm improvements. We have been telling ourselves that practical agricultural education must always take first place. Many speakers at this Conference have taken such a stand. They have told us that good farming methods are the basis of all progress, and that if we farm well we will not need to worry about interest rates. As I study the history of agriculture in Europe I find that cheaper money came first and improvements in agriculture followed as a consequence." In these words did Prof. McPherson, of the Oregon Agricultural College, emphasize the fact that the question of farm credits, which came up for consideration on the last day of the National Conference on Marketing and Farm Credits, held at Chicago recently, was not a small issue in American agriculture, but a great one.

Farming is becoming more and more a capitalistic business. When our forefathers cleared away the forests they lived much unto themselves. The most of their farm implements even were made at home, or at the neighboring blacksmith shop. Their need for credit was small. Today, however, the average farm represents an investment of thousands of dollars where the home of the pioneer represented hundreds, and the farmer's credit requirements have increased in even greater proportion. There is hardly a farmer anywhere who has not at some time or other found it expedient to borrow money. But what is the use of borrowing money for improvements of one kind or another when the interest rate is so high as to absorb the greater part of the financial benefit derived from the improvements made?

HIGH INTEREST KILLS PROGRESS
How, for instance, can the farmers of the Canadian West hope to get along very fast when they must pay 12 per cent. interest on the money that they must borrow? Of course the rate is not always so high as this, but it is seldom less than eight per cent. How much faster would the farmer get along if he could borrow money on such terms that at the end of 10 years of annual payments of six to seven per cent. of the principal sum he would have paid off both principal and interest. These are the terms on which European farmers, through their cooperative credit unions, borrow money. To find some method of applying this system to American conditions was the object of a full day's discussion by the 415 delegates who were present at the Conference.

Herbert Myrick, of New York, a publisher of several farm papers and the author of several prominent pictures of what cooperative credit might be through the American farmer. He stated his belief that through a cooperative system similar to the German land banks, which will be described later, a debt could be paid off in twenty years on

annual payments not greater than the annual average interest. For the accommodation of the farmer desiring short time loans, Mr. Myrick recommended the formation of local banks in which each farmer is interested, in which he would deposit his money, and it in turn would be loaned out to the farmers of the locality according to their trustworthiness and their need. These local banks might in turn affiliate in order that the surplus cash of one community might find a market in another community where demand was greater than supply.

EUROPEAN SYSTEM DESCRIBED
Much light on European systems of supplying farm credit was given by Mr. George Woodruff,

Cheap Money For The Farmer

The Banking Committee of the House of Commons at Ottawa has been taking out-ence recently on the operation of the Canadian Banking system as it affects the various classes of the community. One fact seems to have been clearly established—that Canadian banks do not wish to loan money in small sums to farmers. In the West Canadian Banks have charged as high as 10 to 12 per cent. interest on short loans, and the average rate is over eight per cent. Such high rates are a stumbling block in the way of the best agricultural development. The same conditions exist in the United States as in Canada. How can the farmers of the two countries secure cheaper money?

This was one of the questions up for discussion at the "First National Conference on Markets and Farm Credits" held at Chicago recently. Among the 415 delegates to the Conference were those who had spent years studying the agricultural credit problem. In the adjoining article an editor of Farm and Dairy, the only farm paper in Eastern Canada represented at the Conference, tells of the discussions that took place and of the plans advocated by the several speakers, whereby the farmer, through cooperation, may secure money at rates considerably lower than those now ruling in Canada and the United States.

President of the First National Bank of Joliet, Ill. He divided the various credit systems of the old countries into two classes, the long time, or mortgage loan associations, and the short time societies doing business on personal credit. Of the first class he cited the Credit Foncier, of France, as an example. The Credit Foncier is owned, by private individuals as a joint stock company, but is supervised by the government and the highest official in the bank is a government appointee. This association loans money only on real estate security and only on the amortization plan. To illustrate:

A farmer comes to the local branch of the Credit Foncier and wants 1000 francs, the payments to extend over 30 years. At the present

time the interest on money borrowed from this association is 4.3 per cent. Instead, however, of paying 4.3 per cent. each year the borrower agrees to pay 3,964 per cent. At the end of 30 years the difference between 4.3 and 3,964 has paid off the principal and the farmer is free of debt. That is, by paying an annuity not greater than the annual interest in this country the farmer pays off both principal and interest.

LONG TIME LOANS THE BEST

Long time loans are the rule in older countries, and a loan is more apt to be taken out for 75 years than for 30 years. One advantage of these long time loans is that it relieves the farmer and his family all worry. The ordinary loan soon expires and the farmer may look forward with dread to that date. He is ever in fear of foreclosure. The French farmer, however, knows that so long as he makes his small annual payment his home is safe and his debt getting less and less.

The Credit Foncier loans money on first mortgages only, and up to 50 per cent. of the value of the property. The property must be income producing, soil conservation clauses are inserted in the mortgage and mines, quarries, etc., are excluded. As each little branch of the Credit Foncier does business only in a limited neighborhood, practically every loan is a safe one. The mortgages are not cashed, bonds are gotten out and sold, and the mortgages held as collateral to the bonds. And, as we all know, bonds can be sold at a lower rate of interest than any other form of security.

LAND BANKS OF GERMANY

The second type of mortgage credit associations mentioned by Mr. Woodruff, which has personally investigated in Europe the systems of which he spoke, was the Landschaften, of Germany. This bank differs from the Credit Foncier in that it is cooperatively owned. The land owners of a small section get together and farm themselves into a cooperative banking association. In many cases they work on the unlimited liability plan; that is, every member of the association makes all of his real estate responsible for the debts of the society. In some cases all of the land of the province may be stuck to back the credit of the Landschaften banks. These local banks have affiliated with each other and as they are considered absolutely safe they secure even lower rates of interest than does the Credit Foncier of France. Here, too, loans are given on the amortization plan, that is, paid off in small annual installments.

SHORT TIME ACCOMMODATION

But the farmer occasionally needs money for short time loans for which he does not wish to take out a mortgage. This problem, too, the European farmer has overcome through cooperation. Mr. Woodruff making mention of the Reiffeisen and Schulze-Delitzsch Banks of Germany, and the Credit Agricole of France.

The Reiffeisen banks are strictly cooperative. All of the shareholders therein make themselves liable to an unlimited extent for the debt of the concern. These banks have very little capital stock. They accept deposits, as do the ordinary.
(Continued on page 10)

How We Grow Roots

By A. McCoy, Hastings Co., Ont.

An English neighbor of ours, whose farming experience previous to his coming to this country had been limited to a potato patch in his city backyard, informed us, after he had bought a farm in the neighborhood, that he intended to sow his grain and grasses in exactly the same way as



One Phase of the Question Solved

A farmer who seldom complains about the labor problem is E. E. New, of Howick, Que. Herewith may be seen the neat cottage in which lives one of the married men working for Mr. New. This cottage explains in part Mr. New's success in securing men.

—Photo by an editor of Farm and Dairy.

he had been accustomed to grow potatoes, that is, in drills a couple of feet apart. Of course we laughingly told him his mistake, and he took it in good part. He took our well intended advice much better than do many Canadian-bred farmers here when I start to tell them that they are making a mistake in trying to grow roots according to the same plan that they grow corn. Even as our English neighbor wished to sow his grain wide apart in drills because he had grown potatoes that way, so do the dairy farmers here grow their roots wide apart because that is the way they plant corn.

We should remember that roots take from the soil not quite half as much fertility as does a good crop of corn. Why, therefore, is it necessary to spread the roots in rows three and one-half feet apart? We could plant them in rows 21 inches apart and the drain on the soil would be no greater and the roots would have as good an opportunity of getting a sufficient supply of nutrient from the soil. We grow our roots 22 to 24 inches apart in the row and get almost twice the crop that we would did we waste space planting in rows three and one-half feet apart.

We like to have our root land plowed the previous fall, disked and ridged. We have heard Prof. Grisdale, of Ottawa, tell of the importance of giving corn land well prepared previous to planting, but it is of vastly more importance to have root land well prepared. The seed is much smaller, does not carry the same reserve of food for the young plant and hence the rootlets coming from the seed must find plant food immediately in congenial soil conditions. Hence we disk and drag and roll until we have our soil in the best condition possible. Occasionally in wet seasons it may be advisable to ridge up roots, but in nine cases out of 10 on the level is the plan preferred.

A few years ago we had our roots on a field that we knew was polluted with weed seeds. In sowing this field we followed a plan that gave most excellent satisfaction. The land was well worked early in the spring and then ridged up slightly with a double mould board plow. In a couple of weeks that whole field was green with weeds. We then took our chain harrow (a plank drag would do) and drew it over this ridge lengthwise. The top of the ridge was cut right off, weeds and all, and there we had a weed-free seed bed. Likewise the seed bed was moist as the dry earth on the top had been drawn off. We recommend this plan to farmers with particularly weedy fields.

We find that a combination of mangles and turnips is the easier to handle. We get our mangles

in as early in the season as soil conditions will permit, while the turnip seedling comes after the first great rush is over. Similarly the thinning of the two, which must be done by hand, does not conflict, the mangles being thinned first to one plant in every 15 inches and the turnips to the same distance at a later date. In harvesting also the mangles and turnips do not conflict, in fact the turnips can be left out still almost any date.

The Place for Roots

L. McGuire, Norfolk Co., Ont.

When I state that no dairy farmer should fail to devote a small acreage to roots, I have for my authority the best cattle feeders in the world, the English and the Scotch. Practically all of the great breeds of beef cattle and one of the greatest breeds of dairy cattle come from the British Isles. Here in our own country the herdsmen in many of our best dairy herds are men who learned their business in the Old Land. And they are all strong on roots. I have talked at fairs, sales and elsewhere with some of our Canadian breeders of Holsteins who are making these smashing big records that seem almost past belief, and I find that they all feed roots in preference to ensilage during the feed. Our own Norfolk county Mason, who recently made a World's Record with his wonderful two-year-old heifer, places great reliance on mangle during the record-making period. Mr. Dollar, of New York State, I am

Valued Appreciation

Editor, Farm and Dairy,—I have read the special Dairy number of "Farm and Dairy" with much pleasure and profit. I congratulate you upon the excellence of this production. It is a credit to both the Editor and Publishers. Such numbers must be of great benefit to the Dairy industry. I wish you continued success in your work.—Prof. H. M. Dean, O. A. C., Guelph, Ont.

old, always feeds mangles to cows under test. What is good for these big fellows is just as good for us little fellows whose income comes from the milk cheque and not the price of pure-bred stock.

I myself grow both roots and corn, principally the latter. From my own experience I have found that I can get just about twice as much food value from an acre of corn as from an acre of roots, and ton for ton the corn costs less to produce. The basis of my ration, therefore, is ensilage. The roots, however, play a most important part in rendering the ration more palatable because of their succulence, and they are very valuable as a conditionative. I always notice that if the roots run out and the cows are confined to ensilage alone, that the skin and hair are harsher and the digestive organs do not work so readily. We grow roots and corn in the proportion of one acre of the former to five of the latter.

For the milk cows we prefer the mangles, as we believe the turnips taste the milk. Likewise the mangles are a little richer in sugar and hence a better milk producing food. The turnips, however, are easier to produce and we like to have some of them on hand for the young stock. Root-fed heifer calves are sappy, growing creatures that will out-distance the ensilage fed calves every time.

Why do boys leave Ontario Farms? Let me give my suggestion. Here is a young fellow just starting out. He has \$1,000 cash to invest in land. He has enough besides to buy stock and tools. His cash will pay for 10 or 15 acres in Ontario. It will get him 100 acres in the West. The land is equally productive in both cases. Where will he go? Do I make myself plain?—L. K. Shaw, Welland Co., Ont.

Feed—Our Weakest Point

By "Herdman"

"Breed, Feed and Weed." Such is the slogan that has been dinned into our ears for generations now by all educationists along the stock breeding line—and it is a wise and good saying. It is sometimes wonder if we fully appreciate the relative values of these three factors in herd improvement. I have seen many who believed that weeding out the poorest animals in their herds that they were doing the most effective work possible to produce more milk or better beef. I have seen others who believed that if their stock only had the right ancestry that if they would have solved the problem of large and economical production. In my own opinion, while we cannot do along without all three factors, the feeding is the most important and the one on which the mass of us fall down.

The basis of all production, be it of milk, beef or pork or horse flesh, is a strong, well formed body. While the desirability of an animal's body, its conformation and type, depend to some extent on heredity, it depends more on good feeding.

OLD COUNTRY FEEDS THE BEST

Why is it that Great Britain and France have attained a far greater degree of perfection in the breeding of live stock than we have? Granted that they had a longer start in which to secure desirable foundation stock, they are still miles ahead of us here in America. I believe the explanation lies in the feeding. Even among pure bred stockmen, here in Canada, I find the most lamentable ignorance of the feeding problem. I have actually seen Holstein breeders with the best bred stock obtained, who did not know the relative values of cotton seed meal, linseed meal and bran, and who whose ideas seemed to be to produce as much milk on pasture grasses as summer as possible, and to winter their animals on as little feed as would keep them alive. I have ever heard of Old Country breeders trying to winter their cattle on roughage alone? The Old Country stock man knows that he must feed grain almost the whole year round, particularly to his young stock, in order to develop good body and vitality.

The most noticeable result of this liberal feeding to Old Country stock is to be seen in the herds that are brought to this country. It is very seldom that a Canadian-bred animal is able to outperform an imported one in the show ring, even when



What Kind of a Contest is This?

In the illustration may be seen one of the features of Old Country agricultural fairs, a sheep show contest. This illustration is from a photo taken at the Oxfordshire Agricultural Show.

the breeding is exactly the same. The difference I believe, comes largely in the feeding.

We need to revise our ideas on this feeding subject. If we have faith in the profit-making properties of our animals we should have faith in their ability to pay for the extra grain feeding that is necessary. When we come to realize that feeding is our weakest point, we are then in a position for improvement.

Harrow performed ended up given attention of growing is crop retort does not ferent har as leaves friable, an firm and filled the h

A great vised and form the o Of all these bably the e effective in after it has larger the ac sets the o set in opera ively will g good work large sharp necessary in soil down the place when disc.

A NEW STR

A new disc

The Double recently made has proved to implement two disc harrows of the other with an im with an out so placed as running in hence a muc cutting up of insured. C power is need this disc than however, an ducing the co ter the land

The Spring cannot be too as is common hard land, to surface, very of production.

Where soil possibly the follows: Roll lengthwise and disc harrow on with a commo ever, it is fo perfect tith, th the disc harrow seed should not shape for crop harrow again a for seeding.

The spike-tooth the land w itter fully to corn field a few corn, and in the corn is up. Ha almost certain t. When large a

Styles of Harrows Discussed

J. H. Griedale, B. Agr., Ottawa, Ont.

Harrowing is an operation usually very badly performed, and an operation that is almost always ended up sometime before it should be on any given area. Good plowing is a necessary condition of the best crop results, but through harrowing is an indispensable condition of profitable crop returns from any field. Through harrowing does not necessarily mean three or four or 10 different harrowings, but it means such treatment as leaves the surface of the seed bed smooth and friable, and leaves the bottom of the seed bed firm and solid. Until these conditions are fulfilled the harrow should not stop.

A great variety of implements have been devised and put on the market wherewith to perform the operation common known as harrowing. Of all these implements, the disc harrow is probably the most generally useful and the most effective in the work of preparing the soil for seed after it has been plowed. The larger the disc and the more acute the angle at which it is set in operation, the more effectively will it work. To insure good work, however, with a large sharp-set disc, rolling is necessary in order to crush the soil down that it may remain in place when being carved by the disc.

A NEW STYLE OF DISC HARROW

A new disc harrow, known as the Doubt's Cutaway, has recently made its appearance, and has proved to be a most excellent implement. It consists of two disc harrows, one in front of the other, cutting, the one with an inthrow and the other with an outthrow; the discs are so placed as to prevent their running in the same track, hence a much more thorough cutting up of the surface soil is insured. Considerably more power is necessary to operate this disc than in the case of a single disc. It is, however, an implement capable of materially reducing the cost of preparing the soil for seed after the land is plowed.

The spring tooth harrow is an implement that cannot be too strongly condemned, where used, as is commonly the case, on sod land or on rough hard land. This implement tears up the sods, exposes the grass and leaves an exceedingly rough surface, very certain to give poor results in crop production.

TO PREPARE SOD LAND

Where sod land is being prepared for any crop, possibly the best treatment would be about as follows: Roll with a heavy roller, disc harrow lengthwise and crosswise or on the bias; roll again, disc harrow once more, and then smooth harrow with a common spike-toothed harrow. If, however, it is found that the land is not yet in perfect tilth, then it might be necessary to repeat the disc harrowing and the rolling. In any case, seed should not be sown until the soil is in perfect shape for crop production. It is usually safe to harrow again after conditions seem nearly perfect for seeding.

The spike-toothed harrow may often be run over the land with the average farmer would consider it utterly folly to use it at all, for instance, in the corn field a few days after sowing or planting the corn, and in the same field a few days after the corn is up. Harrowing the field at such times is almost certain to materially help the crop.

When large areas of corn are grown, an im-

plement likely to prove of considerable value is what is known as the slant-tooth or tilting harrow. This enables one to control the depth to which the harrow shall sink in the soil, and so permit of harrowing the corn or potatoes at times and under conditions when the common spike-toothed harrow might do some small amount of damage.

A Tale with a Moral

"Don't feed that pair of chop to that cow. If you must feed her a pair of something, give her bran." These were the words of Mr. G. A. Brethen, of Peterboro Co., Ont., as he entered the stable of an old Holstein breeder intending to purchase one of his Holstein heifers.

"The heifer was due to freshen in a few days," said Mr. Brethen in discussing the incident recently with an editor of Farm and Dairy. "The owner was on the point of giving her a pair of oat and barley chop. I told him if he expected me to buy the heifer not to feed that to her.



A Faster Way than the Old One and Much Easier on the Back

If there is any one around the farm who would welcome the advent of a potato planter, it is the small boy whose back has often ached after a day's "dropping seed." Mr. McKenzie, York Co., may be here seen mounted on a machine that opens the drill, drops the seed, and then covers it. Some machines even cut the soil. With the advent of machinery such as this, potatoes should become a more popular crop among the farmers.

"Well," he said to me, "if you don't want me to give it to yours, I'll give it to mine," and he gave it to another heifer, which was due to freshen about the same time as the one I was purchasing. I found out afterwards that he had a bad case of caked udder to contend with."

We had been discussing with Mr. Brethen the subject of feeding the dairy cow just before and at the time of freshening, and he mentioned this incident during the discussion. "By feeding cooling and laxative feeds," said Mr. Brethen, "I can put as fine an udder on a cow as you would wish to see, with little or no signs of caking. Several weeks before freshening I use as a grain ration of bran, oilcake meal and a little oats. I wouldn't think of feeding corn or barley—they are too heating. At the same time I cut out the ensilage and substitute roots. This may look to some people like getting the thing down rather fine, but when we remember that corn ensilage contains a lot of mature ears we will realize that it is a somewhat heating food.

"By feeding the proper foods it is not necessary to reduce the ration at freshening. I feed liberally up to the time of freshening, and then reduce the ration for a few days immediately after. A little judgment in feeding will often save a man a week or two of work and worry with a caked udder."

The sure way to success in hired man management is to remember that he is a human being just as we are.—A. P. G.

Raising the Spring Litter

J. Hugh McKenney, Elgin Co., Ont.

To get best results in raising the spring litters I arrange to give the sow plenty of exercise. An ideal place is in the barnyard, unmolested by other stock. She is allowed to run there every day for an hour or two, and if the weather be favorable, half a day is not too long. She is kept in a good, healthy condition, but not too fat. The feed that I give, therefore, is not very stimulating or heating. It consists largely of roots, with a mixture of chopped oats, peas and barley, with skim-milk or swill for a drink. I keep wood ashes where she may have access to them every day.

A suitable place for farrowing is an important item in preparing for the young pigs. I always nail a piece of studding around the wall horizontally, about six inches from the floor. This is a great protection for the youngsters. A basketful of cut straw makes a good bed; chaff is not so

good as it is apt to smother the little ones.

The sow at this period is usually a very suspicious animal. It is, therefore, necessary to gain her confidence by kindness so that when the critical time comes she will not be disturbed or excited by an attendant or a lantern. By making repeated visits to the pig pen during the winter evenings quite cordial relations may be established.

In case the sow is restless at farrowing time and is likely to crush the young pigs, I take them to the fire to be dried. I keep them away until the mother is quieted. They are then returned. The feed, at this time, is more in the shape of a drink than a solid food, gradually bringing her to full rations in eight or nine days. The nursing sow's food should be of such a nature and composition that, by degrees, the

little pigs will learn to eat with her at an early age. They will soon commence to do this if long, shallow troughs are provided instead of short, deep ones. When this method is followed there will be no radical change at weaning time, and hence the danger of digestive trouble is lessened. The weaning process is not completed before the pigs are eight or nine weeks old. By this time they will have received a good start.

The profit or loss will depend largely on the progress then made. I feed liberally with excellent food, such as skim-milk, shorts, roots, etc. A stunted pig is dear as a gift, and one overfed with heavy grain is equally unprofitable, as it becomes fatter and ceases to make satisfactory growth.

Time and place for daily exercise should be as regularly provided as feed. When this is done, much of the danger from kicks and other injuries will be eliminated, and the probability of the colts reaching maturity as perfectly sound horses is correspondingly increased.

We have not been in the business long enough to say whether or not high feeding injures dairy cows and decreases their years of usefulness, but so far we have not seen any benefits from the heavy feeding we practice, nor do we expect to see any so long as we feed a properly balanced ration. It pays us to feed all the cows we can handle properly.—A. McCrea & Sons, Queen's Co., P. E. I.



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The Feeders' Corner

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

Grain with Roughage

Would you advise me as to how I should feed a cow giving about a well-balanced ration for milk production, if such could be made of these feeds. Also let me know where I could get the instruction as to the analysis and value of different feeds for dairy cows.—H. W. C.

For a grain ration to be used in conjunction with the average roughage fed on the farm we would suggest the following mixture of the feeds mentioned by H. W. C.: Bran, four pounds; oats, three pounds; molasses, three pounds; oilcake meal, three pounds. We presume the roughage contains a good proportion of clover. A cow giving 47 lbs. of milk a day should receive about 15 lbs. of good clover hay and 35 or 40 lbs. of ensilage, in addition to the grain. The substitution of straw or timothy hay for clover would decrease an incalculable amount in the grain ratio.

As a reference book on feed analysis we would strongly recommend Henry's "Feeds and Feeding," which can be procured through Farm and Dairy, members of the Ontario Agricultural College, will be found a lot of useful information on the composition of Ontario feeding stuffs. This bulletin may be obtained free of charge by applying to the Ontario Department of Agriculture, Toronto.

Protein in Feeds

Will you publish a table showing the amount of protein, carbohydrates and fat of the different feeds. Total protein should an average cow consume in a day.—R. B.

The following table gives the protein, carb-hydrate and fat content of some of the most common feeds:

Feed	Protein	Carbo-hydrate	Fat
lbs.	lbs.	lbs.	lbs.
Oats	9.2	47.5	4.2
Corn	7.9	66.7	4.3
Wheat	12.2	52.2	2.7
Bran	32.2	39.2	2.7
Middlings	12.8	53.0	3.4
Barley	8.2	52.4	4.2
Lined Seed (old grown)	29.5	32.7	7.6
Cotton Seed Meal	37.2	16.9	12.2
Gluten Meal	52.8	43.5	11.9
Timothy Hay	1.8	42.4	1.4
Oat Hay	4.3	46.4	1.8
Com. Red Clover	4.8	35.8	1.7
Alfalfa	11.9	39.6	1.3
Ensilage (corn)	0.9	11.3	0.7
Mangels	1.1	54.6	0.1

Experiments have shown that a cow in the middle of the lactation period and giving an average flow of milk, say 22 lbs. a day, requires the following digestible nutrients: Protein, 2.5 lbs.; carb-hydrates, 13 lbs.; fat, 0.6 lbs.; nutritive ratio, 1: 5.7. For a larger flow of milk the amount of protein must be increased and the total ratio narrowed, that is, we must feed more protein proportionately. In a very heavy flow, the ratio may be as narrow as 1:4, or even narrower. To compound the ratio, multiply the fat by 2½, add to the carb-hydrates and divide by the protein. Thus: (0.5 by 2½) plus 13 by 2.5, equal to 5.7.

A New Potato Product

A new process for converting surplus potatoes into a marketable product has been recently perfected in Germany. The potatoes are washed, cooked by steaming, then run between iron rollers heated by steam to a sufficient temperature to turn the mash into a crisp sheet. The sheets are broken up into small flakes and the product is ready for the market. When the potatoes are carefully selected, the product can be used for

human consumption, taking the place of potato flour and desiccated potatoes now on the market. The new product has the advantage of being much cheaper. For stock feeding the increased digestibility from cooking almost makes up for the cost of flaking. Over 75 per cent. of the original moisture of the potato is removed. The resultant product is said to be almost equal to corn for fattening purposes.

Distribution of Pure Bred Males

Inability to secure the use of well-bred animals is one of the greatest difficulties standing in the way of live stock development in many parts of Canada, particularly in the newly settled districts. The Dominion Department of agriculture, realizing this difficulty, is this year, through the Live Stock Branch, undertaking a widespread distribution of pure bred stallions, bulls, rams and boars. The original cost of the animals will be borne by the Department and they will be placed in the hands of such local organizations as agree to the conditions governing the distribution. In a word these sires will remain the property of the Department, but the individual associations will be responsible for their proper maintenance and management under the general supervision of officers of the Live Stock Branch. In the case of stallions, the members of the associations will also be required to pay a fee covering an annual insurance premium.

All animals distributed will be bought from home breeders and will be Canadian bred. As far as possible, they will be purchased in the province in which they are to be placed. In this way, Canadian breeders will receive encouragement and their market will be increased not only directly but also indirectly through the emphasis given throughout the country to the value of pure bred sires. It is not the intention to place the animals in districts where suitable male animals of the same class are already owned by private individuals. The aim is rather to aid sections where pure bred sires are lacking and as well to encourage new communities in which they are to be placed.

All bulls distributed will be purchased subject to the tuberculin test, and any stallions which have passed a rigid veterinary inspection for soundness will be selected. In order to take advantage of this form of assistance, it will be necessary for interested parties, in any section, to local associate the organization of a local association where hands such as sires are required may be placed. Complete information regarding the rules and regulations governing the distribution may be made upon application to the Live Stock Commission, or Ottawa. Whenever possible, an officer of the branch will render assistance in the perfecting of the necessary local organization.

"Parcels post would eat into our business," say the express companies. Isn't that a good reason why we farmers should want it?

"Buying in" cows may look good to the supplier of city milk, but the day is surely coming when he will be sorry that he did not raise his own. It is the only sure method of maintaining the producing qualities of a herd.

That bull calf that you offered for 30 new subscribers to Farm and Dairy came last Thursday at a fine car. It is, mostly all white with a few dark spots on his neck and ears. I think he will make a very large bull even for a Holstein.—R. T. H. Collins, Prince Edward Co., Ont.

FARM

What to do

T. G. Raymond

There is a tendency to pay too little attention to the proper care of the land. The farmer who does not take the time to improve his soil is sure to find himself in a predicament when the time comes to reap the harvest. The farmer who does not take the time to improve his soil is sure to find himself in a predicament when the time comes to reap the harvest.

Speculation

When the time comes to reap the harvest, the farmer who has not taken the time to improve his soil will find himself in a predicament. The farmer who has not taken the time to improve his soil will find himself in a predicament.

An outdoor

ways for doing things that will save the farmer a great deal of trouble. The farmer who does not take the time to improve his soil is sure to find himself in a predicament.

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iron harrow.

ways for doing things that will save the farmer a great deal of trouble. The farmer who does not take the time to improve his soil is sure to find himself in a predicament.

In meadows two

ways for doing things that will save the farmer a great deal of trouble. The farmer who does not take the time to improve his soil is sure to find himself in a predicament.

Your Soil Is Alive

To all intents and purposes, soil is alive. It breathes, works, rests; it drinks, and, most important of all, it feeds. It responds to good or bad treatment.

It pays its debts, and pays with interest many times compounded. Being alive, to work it must be fed. During the non-growing seasons certain chemical changes take place which make the fertility in the soil available for the next season's crop. But this process adds no new plant food to the soil. Unless plant food is added to soil on which crops are grown, unless the soil is fed, in time it starves. There is one best way to feed your soil. Stable manure, which contains all the essentials of plant life, should be spread evenly and in the proper quantity with an

I H C Manure Spreader

I H C manure spreaders—Corn King or Cloverleaf—are made in all styles and sizes. Sizes run from small, narrow machines for orchard and vineyard spreading, to machines of capacity for large farms. The rear axle is placed well under the box, where it carries over 70 per cent of the load, insuring plenty of tractive power at all times. Beaters are of large diameter to prevent winding. The teeth that cut and pulverize the manure are square and chisel pointed. The apron drive controls the load, insuring even spreading whether the machine is working up or down hill, or on the level. I H C spreaders have a rear axle differential, enabling them to spread evenly when turning corners.

The I H C local agent will show you all their good points, and will help you decide on the one that will give your best. Get literature and full information from him, or, write the nearest branch house.

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FARM MANAGEMENT

What to do with Thin Meadows

T. G. Rayner, Seed Division, Ottawa.

There is always a good deal of speculation as to how this or that crop is likely to pan out during the season. Perhaps with no crop is there more speculation than with our meadows as to the prospect for hay or pasture; so much depends upon them. With about three million acres of the ten million acres under cultivation in Ontario in meadow the hay and pasture crop is of no inconsiderable importance.

Speculation was rife this winter when ice covered so many meadows whether or not much of the seeding would be smothered out. These fears, however, have been allayed now that spring has really come and the meadows are promising well on the start. There may be some critical times in store for them yet which we cannot foresee. They may be safeguarded to some extent and it will be the pur-

will pay to sow some extra timothy and alsike over these patches.

WHEN MEADOWS ARE MOSS BOUND
Old meadows may sometimes be moss bound. This is quite often due to insufficient drainage. A thorough harrowing with a sharp toothed harrow or even a disk run over such a meadow at not too much of an angle will pay. Some extra seed and stable manure will also pay.

The kind of seed used may have some influence. One should adapt the kind of grass and clover seed to the nature of the soil to be seeded.

If meadows weren't pastured too closely in the autumn and more afterwards were left, not only would the grass start up more quickly in the spring, but the crop of hay would be much heavier.

This year in seeding new meadows with Ontario grown seed it will pay to use fully one-third more seed than is usual, as much of the seed will not grow or if it does grow, it will produce rather weak plants. Let the clover meadows get all started before pasturing and plan to keep some of the second growth for seed.



Not Yet, But Soon—If Fine Weather Continues
An outdoor milking scene snapped for Farm and Dairy Near Hamilton, Ont., last summer.

pose of this article to suggest some ways for doing it.

CARE FOR THIN MEADOWS
In the first place, what are the causes of thin meadows? I would say first that too little seed is used in the seeding process. When, as we have observed in former articles, 12 pounds of red clover an acre only means one seed for about every two square inches, 12 pounds of timothy an acre only about two seeds a square inch, and six pounds alsike one seed for about one square inch, it will be realized by many farmers that they have been using too little seed to get the best results. If the new meadow shows any signs of this it is good practice to sow a little extra seed as early in the spring as the meadow is dry enough to run over it with a light iron harrow. On stony meadows this harrowing will loosen up many rolling stones that will either have to be pitched off or rolled in right away while the ground is soft in order to run a mower over it where intended for hay. It is good practice to use a comparatively heavy roller on all meadows as early in the spring as the meadow will carry a team without any great injury to it.

In meadows two years old this rolling is splendid practice. There the soil with the frost and even the timothy stools are more or less raised. They will make a quicker start when they are pressed into the soil. And by the way this heaving may be another reason for thin meadows.

In some meadows the depressions on the surface of the field act as pockets for a good deal of water which freezes, and often smothered out the seeding. Unless these patches are removed, weeds will take possession. It

How to Use the Roller

J. H. Grisdale, B. Agr., Ottawa, Ont.

The roller is commonly looked upon as the implement wherewith to give the finishing touch. It is just at this point, however, that the greatest danger lies. It is as an operation after seeding that rolling is, on the average, of least value. There are, of course, conditions when it is advisable to roll after seeding, but the true value of this implement lies in its usefulness as a means of preparing the land preparatory to seeding, as already mentioned in connection with harrowing.

The use of the roller in preparing sod land for grain or corn is much to be commended, and it is here that this implement is of the greatest value to the farmer, in certain soils, as for instance, mucky or peaty soils, it is often advisable to roll once or twice before seeding, and two or more times after seeding; this more particularly, if the land is to be seeded down to grass or clover, at the same time as sown to grain.

WHEN ROLLING CONSERVES MOISTURE
No land should be rolled after seeding if the surface is at all damp. The surface should be allowed to dry a few days before the roller is put on. Rolling in this way a few days or even two or three weeks after the grain is up, breaks the crust, forms a mulch, and so helps to conserve moisture.

On light soils, rolling is an essential operation after seeding to insure quick germination of both grain and grass seeds. Here again, however, it is often advisable to roll a second time two or three weeks after the grain is up. This helps firm the soil and breaks the crust as before stated.

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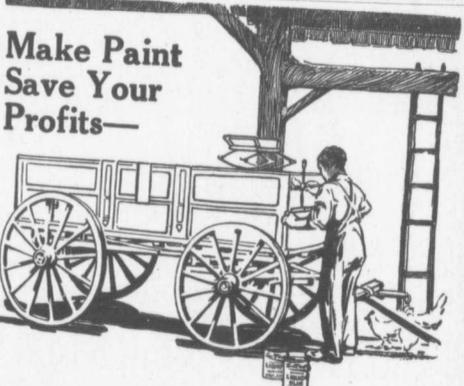
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HORTICULTURE

How to Deal With Borers

I. F. Metcalf, B. S. A., Dist. Representative, Manitoulin Is., Ont.

An enemy of our fruit trees here on Manitoulin Island that has done a great deal of damage is the Borer.

The presence of Borers in a tree is indicated by the lack of growth and by the presence of sawdust and excrement that are pushed out from their holes. These may not be detected until after the damage is all done unless the soil is kept away from the base of the tree. Frequently a tree will not grow, and will finally girdled before one is aware that Borers are working in the tree.

When the work of the Borers is noticed the best remedy is to cut them out with a sharp knife; or a very flexible (copper) wire may be pushed in and they may be killed in that way. There are several ways of preventing this trouble. The idea is to prevent the female beetle from laying her eggs on the trunk of the tree. These eggs may be laid any time now and would soon develop into the Borers which would later on do the damage to the trees. Any preventative treatment must be given now as these treatments would have no effect on the Borers themselves.

A great variety of washes have been used for preventing the female beetles from laying their eggs upon the trees. The following is probably as effective as any that can be safely used without injury to the bark (after having removed all loose bark with a dull hoe or scraper):

A WASH EASILY MADE
Dissolve one-half gallon of soft soap or five pounds of whale-oil soap in one-half gallon of hot water and add a half pint of carbolic acid. When mixed all five gallons of warm water and enough lime to make a whitewash of about the consistency of paint. Finally, stir in one-fourth pound of Paris green. Apply the wash with a stiff brush, covering the bark thoroughly and completely, and filling all cracks and crevices. Another application should be made in about three weeks.

The use of something that will not only protect the trees from the attack of the Borers, but also from the heat of the sun, is more useful and economical than any wash. The parts of trees injured by heat are more liable to the depredations of Borers than the healthy, uninjured portions and so anything that will prevent sunscald and will at the same time keep off insects will be a double benefit to the tree. The fruit grower might take some wood veneer such as is used in basket making, or birchbark, and wrap around the trunk of the tree beginning just below the surface of the ground and extending upwards for about two feet. Bank the base of this up with some soil to prevent the insects getting in that way and fill the top with cotton wool. See that there are no openings along the length of this covering where insects could get in. If applied in the fall this covering would also protect from mice.

Don't forget to enjoy the company of your flowers. The mornings and evenings are the best hours in the garden.

Pruning Bush Fruits

Both currant and gooseberry produce their fruit on wood two, three, four or five years old. The new one year old wood seldom bears much fruit. Wood more than four years old usually grows rather weak and bears only a small amount of rather inferior fruit.

It is generally considered advisable to remove all wood from both currant and gooseberry bushes that is more than four years old. Then thin cut the new canes that came up from the ground or near the ground last season to three or four of the strongest ones, and head these back to about two feet in length.

If this plan is followed season after season, your gooseberry and currant bushes will consist each year of three or four one year old shoots, three or four two years old, the same number of three year old, and also of four year old branches.



Eliminating the Middleman

Gardeners who previously have been dealing direct with European seedsmen, find this year that they must deal with the Canadian seed houses and are objecting strenuously to the prices charged for vegetable seed. Mr. W. B. Anderson, Peterboro, Ont., is not worried by the middleman's profit on outside relations. He grows his own.

—Photo by an editor of Farm and Dairy.

Pear Scab and its Treatment

Dr. J. B. Dandeno, Durham Co., Ont.

Pear Scab is a very serious disease of the pear tree. It ranks, perhaps, second in importance to that of the twig or fire blight. When pear scab gains a good start it is exceedingly difficult, if not impossible, to clear it out of the orchard because of certain characteristics which this disease possesses. Applied as it is a relative of the pear scab, having a similar relation to it as beets have to mangels. Both are fungus parasites. They differ, however, in one important particular, as a knowledge of this peculiarity is essential to a successful warfare against the pear scab.

This disease attacks the fruit, leaves and branches, while the apple scab attacks only the fruit and the leaves. The apple scab does not attack the pear tree, nor does the pear scab attack the apple tree, as many people suppose. Apple scab yields readily to its cure because of its superficial nature. The pear scab does not, and, therefore, can be reached with the spray liquid. Pear scab works on the twigs and small branches burrowing under the bark and wintering over while in this condition. Because of this habit the fungicide can not readily be applied directly to the fungus. Moreover, serious damage is done to the twigs and branches, many of them becoming so "cankered" by the scab that death is the result. Pear scab is common in this locality, and much of the roughened appearance of the older branches is due to it.

When Selecting

F. G. Stewart, Lincoln

If I were asked to select the best varieties of grapes would choose them as follows:

(1) Concord: These grapes are woolly in texture and does not injure. They will grow on a clay and are good shipping varieties and table grape.

(2) Niagara: This is a heavy seedling and table grape.

(3) Niagara: This is a green grape.

(4) Moore's Early: A late grape, I do not advise planting ground.

(5) Vergennes: A green grape on either hand.

(6) Niagara: A green grape with a heavy seedling.

(7) Niagara: This is a green grape.

(8) Moore's Early: A late grape, I do not advise planting ground.

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(23) Niagara: This is a green grape.

(24) Moore's Early: A late grape, I do not advise planting ground.

(25) Vergennes: A green grape on either hand.

For trees which are not seriously affected, the disease can be kept well in check by spraying with lime-sulphur or bordeaux just as for apple scab, with the addition of one application after the leaves drop in the fall. This should consist of strong lime-sulphur, or of a copper sulphate solution (not bordeaux) of suitable strength. In addition to this it is well to write to examine the trees to see if the branches have become affected. If they have, such branches should be pruned out and burned. For trees whose branches are now more or less seriously affected, the pruning saw is the chief instrument. Prune out the worst, even to one-third of the total top, a similar portion next fall, and the remainder of the old top the following year. By this method 60 or 70 per cent of the orchard may be saved. During this time the orchard should also be treated with fungicides as indicated in the preceding paragraph.

Pear scab gains an entrance to the branches during their first year's growth when they are green and delicate. After the corky bark is formed, entry is made only through wounds.

When Selecting Grapes

- F. G. Stewart, Lincoln Co., Ont.
- If I were asked to select the six best varieties of grapes for planting I would choose them as follows:
- (1) Concord: The buds of this grape are woolly in the spring and frost does not injure them easily. They will grow on either sand or clay and are good shippers.
 - (2) Warden: This grape has good blue qualities and is a splendid table grape.
 - (3) Niagara: This is a desirable green grape.
 - (4) Moore's Early: An early grape I would not advise planting on hard ground.
 - (5) Vergennes: A good red grape, grown on either sand or clay.
 - (6) Agawam: A good grape for the soil. On heavy soil it goes too much to wood.

Soils for Sweet Peas

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

An easily worked clay loam is the best kind of soil for sweet peas. It is usually a moist cool soil and fairly rich in potash and phosphoric acid. With the addition of well-rotted barnyard manure thoroughly incorporated with it, it should be sufficiently rich to grow very good sweet peas. Sweet peas are liable to run too much to vine if planted in clay loam and heavily manured, hence, as stated before, only moderate fertilizing is necessary or desirable.

I have had good results in growing sweet peas in light sandy loam soil with a moderate dressing of manure, but if the season were a hot one the results would not be so good. If there is no soil available except a sandy loam the surface should be kept heavily mulched for eighteen inches on each side of the row with the lawn clippings during the summer or better still with short manure on top of which may be put the lawn clippings for cleanliness.

It is an unfortunate thing for the apple industry when we have a year like it was year before last when all fruit is clean without having been sprayed. Fruit growers then come to think that it is just as well "Trust in the Lord" and they expect clean fruit again the next year. How sad in their experience has been de-moralized time and time again.—P. J. Casey, Dominica Fruit Inspector.

Repeated croppings with any one crop wear out the land. Better rotate.

POULTRY YARD

Shipping Day-Old Chicks

A great many people are surprised to hear that chicks, before they are fairly dried off, can be safely sent by express from 200 to 1,000 miles and reach their destination alive and in good condition, says a writer in Farm and Fireside. But such is the case, and today the shipping of day-old chicks is a great business, thousands and thousands of the little chaps being shipped all over the world during the hatching season.

Some people do not know that a chick, which escapes from the shell in which it has been a prisoner for three weeks, will stand a lot of abuse and live, provided you are not too harsh with it. Nature has provided a supply of nourishment for the little fellow in the form of the yolk of the egg, from which it is hatched. The chick comes from the shell with the undigested yolk in its body, and this furnishes all the food that the chick needs for the first 48 hours of its life. When the little chicks are packed away for several hours during shipment, they are much better off than if they were exposed to the sudden changes of running in and out of the hover of the mailer. And those are the reasons why so many are safely sent.

WHEN SHIPPING SMALL LOTS

After the chicks are hatched and nicely dried off, they are ready for shipment. I have found baskets to be excellent for shipping the little fellows in small lots of from 12 to 60. These baskets should be strong and light. About four inches is the proper height. I line the basket well with burlap. Out clover and chaff are placed in the bottom. The chicks are then put in a cover of burlap sewed over the top of the basket. A label, "Live Chicks," is sewed on in a conspicuous place, and they are ready for shipment. I like baskets best, for they are light and easily handled. Manufacturers can supply you with any sized basket you wish.

If you prefer to ship in boxes, make them four inches high, of light material, and line them with the material for the basket. If any great number are to be shipped, the chicks can be placed in boxes containing several dozens. Don't feed them anything for the journey. It is injurious to them to come to stay. Buying young chicks will save you a lot of trouble and money too. Send your orders early and don't expect to have your chicks shipped the day after you order them. You know you cannot get them until after they are hatched.

Poultry Experience

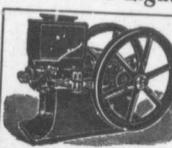
Chas. T. Dakin, Prince Edward Co., Ont.

We have 40 Ancona pullets on our farm and four or five old R. I. Reds. We got our first eggs from last season's crop of pullets in December, and up to the present time have received a little over 1,600 eggs. We ran out of wheat lately and I find that the egg yield dropped immediately.

We keep grit and shell before our pullets and also a hopper of bran. Corn, buckwheat, oats and wheat are zant-red morning and night in the litter. A mash of corn meal, bran and house scraps almost dry, is fed at noon. We have also used some meat meal. We have a cotton front house 13 by 26 feet.

I would like to know how Mr. R. A. Morrison fed those 60 pullets that he kept in a house 14 by 14 feet.

"MONARCHS" Make Farm Work Light



A willing, easily moved "Monarch" Engine saves hours of work in sawing, wood-pumping, grinding, cutting slugs, cream separating, etc. It pays to have one. The "Monarch" has spark retarder, throttle-speed regulator, priming cup, carbon-steel shaft, eight fuel gauges, etc.—the quality features of an automobile engine. Size from 1/2 h.p. to 15 h.p.

Get our "red circle" folder for a post card. It explains every feature.

CANADIAN ENGINES Limited, DUNNVILLE, ONT.

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THE FROST & WOODS Co., Limited, Montreal, Que., St. John, N.B. **MITHS' FALLS ONT.**

FOR SALE AND WANT ADVERTISING

TWO CENTS A WORD, CASH WITH ORDER

ENGLISH PENCILLED, FAWN AND White Indian Runner Duck Eggs for Hatching, \$1.00 for 12—Edward Jenner, Walkerton, Ont.

S.C.R.I. RED EGGS, from good laying strain, \$1.00 per 12. Shipment guaranteed—Jas. C. Barnes, Diligent River, Ont.

INCUBATORS AND BROODERS COMBINED

The Philo System. This machine gets the largest percentage of the hatch of any machine on the market to-day. Free catalogue. Address

THE CYCLE HATCHER CO., TORONTO
 415 SYMINGTON AVENUE, TORONTO
 G. M. Collins, Canadian Manager, Dept. 2

RAISE THEM WITHOUT MILK

Has Same Food Value AS EGGS

COTTON SEED SUPPLIES MEAL MAKES MEAT AND MILK



PROTEIN CHEAPER THAN ANY OTHER FEED

WRITE FOR FREE BOOK "SCIENCE OF FEEDING"

F.W. BRODE & CO. MEMPHIS, TENN.
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Baby Chicks

Order your baby chicks now from our splendid laying strain of SINGLE COMB WHITE LEGHORNS

Utility Poultry Farm

T. G. DeLAMERIE, Prop.
STRATFORD - ONT.

The Call of The North

Do you know of the many advantages that New Ontario, with its Millions of Fertile Acres, offers to the prospective settler? Do you know that obtainable free and at a nominal cost, are already producing grain and vegetables second to none in the world?

For literature descriptive of this great territory, and for information as to terms, homestead regulations, section rates, etc., write to

H. A. MACDONELL,
 Director of Colonization,
 Parliament Buildings,
 Toronto, Ontario

18 LIVE HENS

We shall pay this price per pound for good live hens delivered in Montreal.

We handle dressed calves on commission. Try a shipment.

Harris Abattoir Co., Limited, Montreal

HARBYS CREAM MILK

CREAM EQUIVALENT FOR RAISING CALVES AND YOUNG PIGS

CONTAINS A MUCH HIGHER PERCENTAGE OF REAL VALUE THAN OTHERS SOLD OF LEADING MANUFACTURERS, OR DIRECT FROM W. W. RENNIE CO LIMITED

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May 1, 1913.

A Home Made Evaporator

R. F. Whiteside, Victoria Co., Ont.

Now that the three evaporator advertisements have disappeared for the time being, it occurred to me that I might tell Farm and Dairy readers how one-horse sugar and syrup makers might make a cheap, but efficient evaporator, arches and smoke pipes.

Get from 200 to 500 trees procure two galvanized iron sheets 3 by 10 feet, 24 gauge. This will be 140 square feet or about 140 lbs., and can be secured from Rice Lewis & Sons, Toronto, for \$6.30. Cut one three foot sheet in two, bend up all round six inches, making two pans 2 by 4. Then make a 10-foot smoke pipe of the other one with a few rivets, a punch and hammer on a long two-inch bar of round iron. Take the four foot sheets to a tinsmith having

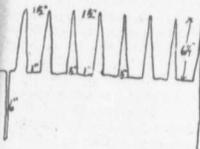


Diagram of Sap Pan

an cave trough press and have him crimp them and solder in end pieces. Also have him put on a strip one-eighth, by one and a quarter by three feet long to prevent crimp being bent or solder being cracked.

A very simple arch will suffice. Have the front four feet on the lower slope of rising ground and a stone wall 18 inches high for front four-foot pan. A door is not necessary but grates are useful. The second corrugated pan just sets on the level ground and banked up at sides a little. For the back pan a wall of sods about six inches high does very well. After sap is reduced to 12 or 16 gallons it can be cooled off and cleansing. Some use soda, others four to eight cups of milk with three to six eggs well beaten and stirred in to help bring all scum to the surface. When completed run through a large white belt strainer and this can be finished in the corrugated pan if speed is considered.

This excellent economical apparatus should not cost a farmer more than \$10, over and above his own two or three days' labor.

An Annual Pasture Crop

An squaring up field. All is needed but two acres. As I intend to pasture this field, would you recommend a pasture mixture for the unseeded portion?—Subscriber.

As a crop that can be sown in the spring for summer pasture for milch cows, we would suggest one of the following mixtures: Peas and oats, at the equal parts by weight, sown at the rate of four bushels to the acre; peas, oats and vetches, equal parts by weight, sown at the rate of three bushels an acre; peas, oats, barley, wheat and vetches, equal parts by weight, at the rate of 3 1/2 bushels an acre with 10 pounds of sorghum an acre added.

Professor Zavits, of the O. A. C., strongly recommends the use of sorghum in a mixture for this purpose. Sow from five to seven weeks before the pasturage is required, depending on the soil. If you do not consider it advisable to hold the rest of the field that long, a cheap fence might be erected of wire and stakes around the newly seeded portion until it is ready for pasturage.

"There's nothing to pay"



SIMPSON'S PAY DELIVERY CHARGES

THE gratifying experience illustrated in the above picture will be yours if you shop by mail at the SIMPSON Store. Your purchase, whether for fifty cents or fifty dollars, will arrive all delivery charges paid. You will have "nothing to pay."

You will know before mailing your order, exactly what it will cost after you receive it, for the price quoted in the SIMPSON Catalogue is all you send to have any article delivered free.

Not only is there "nothing to pay" when your parcel arrives, but there's "nothing to pay" if you wish to return your purchases. Send them back at our expense.



The fact that we are parties to a one-sided contract like this—bringing the goods to your door and taking them away again if you are not pleased—makes it imperative that in our catalogue all illustrations be exact and descriptions truthful. Every article is carefully selected—each garment must be Fashion's "last word" in style—each item of merchandise must represent the one best value of its kind.

We guarantee satisfaction, or your money back

OUR SPRING AND SUMMER CATALOGUE is now being mailed. Send for a free copy. Just write your name and address on a Post Card and ask for Catalogue Number 295.

THE ROBERT SIMPSON COMPANY LIMITED
TORONTO

FARM AND DAIRY

AND RURAL HOME

Published by the Rural Publishing Company, Limited.

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2. **SUBSCRIPTION PRICE, \$1.00 a year.** Great Britain, \$1.25 a year. For all countries, except Great Britain, add 50c for postage. Notice of the expiration of subscription is sent to all subscribers, who then continue to receive the paper until they send notice of discontinuation. No subscription is continued for more than one year after date of expiration. A year's subscription free for a club of two new subscribers.

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U. E. Representatives: W. H. Goodwell, 625 People's Gas Buildings, Chicago, Ill.

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

CIRCULATION STATEMENT

The paid subscriptions to Farm and Dairy exceed those of the entire circulation of each issue, including copies of the paper sent subscribers who are not slightly in arrears, and advertising copies, which vary from 15,119 to 17,393 copies. No subscriptions are accepted at less than the full subscription rates.

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

OUR GUARANTEE

We guarantee that every advertiser in this issue is reliable. We are able to do this because the advertising columns of Farm and Dairy are as carefully edited as the reading matter, and because we protect our readers, we turn away all unscrupulous advertisers. Should any advertiser herein dishonestly wish you as one of our paid-in-advance subscribers, we will refund to you within a week of its occurrence, and that we find the facts to be as stated. It is a condition of this contract that if we find an advertiser you state: "I saw your advertisement in Farm and Dairy."

Rogues will 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.

SALESMANSHIP IN COLLEGES

Agricultural colleges that devote their attention altogether to instructing students in the production of greater crops or of better farm animals, are hopelessly out of touch with agricultural conditions to-day. Colleges that make no provision for instructing their students in the marketing of crops are aiding farmers to solve only one of their problems, while the other is of equal or of greater importance.

Such was the opinion expressed again and again at the First National Conference on Marketing and College Credits held at Chicago recently. College men themselves who were present at that conference admitted that the college that neglected instruction in marketing was only half doing its work. It was pointed out and proved by statistics that great crops do not benefit the farmer, as great crops lead inevitably to low prices. The college,

if it is to encourage farmers in the growing of great crops, should help them to solve the problem of marketing these crops to advantage.

We realize that there are great difficulties in the way of establishing a department of markets in the agricultural college. The men have not yet been developed to handle such departments. We would suggest, however, that our Canadian colleges might make a start along this line by conducting a series of lectures, say 10 in a year, the lectures to be given by men who are noted as successful salesmen, both farmers and business men. Such lectures, even if they did not give the student direct information on the solution of his own marketing problem, would at least awaken the student to the importance of this phase of his business and set him thinking in the right direction. The day is not far off when public opinion will demand that marketing be a subject of study at every agricultural college.

IS THIS POLICY WISE?

Another million and a quarter acres of Ontario's free land is to be handed over to a railway corporation! When McKenzie and Mann were given two million acres of Ontario land a few years ago, we were led to believe that from that time on application for land grants would not find favor with the provincial government.

Within the last week or two we have been disillusioned. The Ontario Government has introduced in the Legislature a bill authorizing a grant of over a million acres of land in New Ontario to the Lake Huron and Northern Ontario Railway Company. The price is a mere bagatelle—nine hundred thousand acre at twenty-five cents an acre and three hundred thousand acre at fifty cents an acre.

One provision of the charter provides that the company must bring in 3,750 settlers within 12 years. The government believes that in this way they will populate New Ontario with little trouble or direct expenses to themselves and at the same time, railway construction, will open up good country that will supply cheap farms for the surplus population of Old Ontario and attract emigrants that would otherwise go to the prairie provinces.

While a railway company may be deserving of government assistance in developing a new country, we believe that the granting of large tracts of the crown lands is not the best method of giving such assistance. The growth of Canada's population is most rapid—ten times more so than that of the United States at the same period in its history. Within one generation all the free land in Canada may be occupied. Land that can now be had for twenty-five or fifty cents an acre will in that time increase in value one hundred fold. We can realize the extent to which railway companies holding large tracts of land will benefit. If the government must assist such companies it would be cheaper

to endow them with cash and retain the land for the public good. The land could then be sold in small parcels as required for settlement, or for lumbering purposes. The unearned increment resulting from the increasing value of the land would thus be returned to the people and not go to fatten railway dividends.

We have seen the results of granting large tracts of our Western lands to "development" companies. These companies "hold up" new settlers as they come into the country and enrich themselves through the increasing value of the land which they own, this value having been created solely by the increased demand for the land.

The perniciousness of the practice of granting large tracts of our crown lands to corporations that will grow fat on the unearned increment is becoming more apparent. It is up to us to let our representatives know the stand we wish them to take on this question.

THE MEXICAN SITUATION

The situation in Mexico, as we read it in the newspapers, does not appear to be of interest agriculturally—but when we read between the lines and study Mexican conditions the situation evolves into one essentially agricultural. Mexico, with its revolutions and counter revolutions, with its yearling expenditure of human life and hard earned money, carries a pointed lesson to farmers in Canada who have the making or unmaking of the country in their hands.

What is the trouble in Mexico? It is land hunger. The Mexican peon does not wish to fight any more than the Canadian farmer; but he is fighting continually. He is rebelling against slavery—land slavery. Nominally he is free. The trouble started hundreds of years ago when Cortez conquered Mexico. That old Spaniard divided the land among his favorites and the great majority of the people, having no land of their own, were forced to work for those who owned the land. The result was that wages were forced down below a living rate, and in the last hundred years Mexico has never known a day of such peace as we experience here in Canada.

Where are we heading for? It is true that at present there is much free land in Canada, and land monopolization under present conditions is almost an impossibility. At the present time, however, people are flocking to Canada 10 times faster than they did to the United States when the population of that country was the same as is the population of Canada to-day. We predict that within the next 30 to 50 years, if the present inflow continues, that practically all of the available land in Canada will be taken up. Then, yes, long before then, will the proportion of landless men increase with all the dissatisfaction that this involves.

In our cities to-day we are beginning to develop the rudiments of the same cause as lies beneath the Mexican situation. Immensely high land values are making the few rich and

May 1, 1913.

After all is said and done, the fine stock forward which we are each individually striving is that of a more comfortable and therefore a more happy life. And to reach this goal it is necessary to be to the more or less successful in our business way. But the trouble with our scheme of living is that we do not feel like growing rich and business success is, and keep struggling forward for more land and money until their related possession is a thing of the past. The man who can get happiness. The man who can get it with is actually better off than the man who goes storming and who feels like growing rich and old. Somehow the kind you get set on then are something like a green picked apple—Farm, Stock & Home.

exacting such a large proportion of the wages of the worker for rent that life is ever becoming a burden to him. These same increasing values are also absorbing such an increasing share of the wealth of the country, that the farmer, too, feels the load.

What difference is there between our system of land ownership here in Canada and that which exists in Mexico, aside from the fact that we still have free land available? There is no difference, what conditions may we expect in Canada when our free land is exhausted? The more we think about this the more convinced do we become that our farmers' organizations are right in their contention that all taxes should be placed upon land values. Such a system of taxation would insure a just proportion of the taxes raised on city land values being used for the benefit of the farmers who help to create city values. Such a system would also insure all land being used to the best advantage.

BE EASY ON THE BOY

"I suppose I would be on the farm yet if conditions had been right."

The speaker was a brakeman on the train on which an editor of Farm and Dairy was travelling recently. We are always interested in the boys who have left the farm. We inquired as to the conditions that had given the young man a dislike that had given him "I had to work for farm work."

"I had to work too hard," he replied in answer to further inquiries. "My father had the idea that the way to success lay along the road of hard work. As soon as we had been big enough to reach the cow's teats we were set at the milking. When fall enough to properly grasp the plow handles we were at that. I have handled a scythe behind my father when my arms were aching to the shoulder. I decided that there must be an easier way of making a living than that."

The story told by this young runaway comes home with particular emphasis at this time of year. The busy season is now approaching—here, in fact. Every bit of labor available will be needed to get the crops. With labor as scarce as it is there is a tendency to expect little too much of the farm boy. True, he may only be asked to do chores, but even chores, in too great quantity may be most burdensome to the small boy with a boy's love of play.

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Ideal Green Feed Silos Are Sweeping The Silo Field

Last year we sold more than twice as many Silos as ever before, and during the first three months of 1913 we have more than doubled the sales for the same period in 1912.

This shows conclusively that Canadian dairymen are coming to realize the advantages of the Silo and to appreciate just how much better the IDEAL GREEN FEED SILO is than any other make.

Here are some of the points of superiority which make these Silos so popular:

Material: Canadian Spruce especially selected for our own use.

All lumber is saturated with a solution which prevents rot and decay and reduces the tendency of the staves to swell or shrink and adds two to three times to the life of the Silo.

Hooped with heavy round iron hoops every 30 inches apart.

Only malleable iron lugs are used.

Doors on the Ideal Green Feed Silos are self-sealing.

Doors are only 6 inches apart, can be removed instantly, and are always air-tight.

The roof is self-supporting; built without rafters.

Silo can be filled clear to the top through the dormer window.

All sizes furnished.



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 discussion. Send letters to Creamery Department.

In the Ice House

By Jas. Sorensen.

Now is the time to watch the ice in the icehouse, and see that the saw dust is packed around the sides, also keep eight or ten inches of saw dust on top of the ice. When the icehouse is filled, the saw dust is usually packed around the ice as well as possible, but if it is damp, it is generally forced into lumps, which makes it impossible to pack it in tight around the ice and, as soon as the weather gets warmer in the spring, the lumps of saw dust thaw out and sink down, and it is then necessary to pack it again. If this is not done, there will be a chance for the air to work into the time for a few inches of time, may cause a heavy loss of ice.

A good method is to go into the icehouse every day at this time of the year, and go around the outside with a piece of board, packing the saw dust down. This will only require a very little time and labor, and may save you from running short of ice next summer and, if you have ever tried to make butter in hot weather without out ice, you will know what it means. If you have never had this experience, you have not missed much, as it is far from pleasant, and, besides making a lot of work for the buttermaker, it may be the cause of heavy losses to the creamery.—Dairy Record.

Hog Feeding as a Side Line

The general run of creameries make no positive effort to utilize the by-products, such as the skim milk and buttermilk. Some charge their patrons a few cents a can; others allow it to be carried through a drain pipe to the nearest and most convenient ravine or depression in the field. Some creameries, however, are making profitable use of the buttermilk by feeding it to hogs. The value of buttermilk as a food for hogs has long been known to practical feeders. The value of buttermilk for this purpose depends largely on the price of pork, so that the present high prices give the buttermilk a relatively high value as a hog feed. The following creameries found it profitable to feed buttermilk to hogs:

A creamery in California fed 86

hogs on buttermilk and middings, from which it realized an average net profit of \$10.75 a hog for the season.

A creamery in Iowa fed 308 hogs on buttermilk, corn and pasture and reports an average net profit of \$5.38 a hog.

A Kansas creamery reports feeding 78 hogs on buttermilk and corn, with an average profit of \$2.69.

In Oklahoma one creamery fed buttermilk and shorts to 170 hogs and reports a net profit of \$7.32 a head.

Pennsylvania creamery reports feeding buttermilk, middings and shorts to 30 hogs, with an average profit of \$6.60 a head.

A Washington creamery fed 69 hogs on buttermilk, shorts and bran, with a profit of \$5.26 a head.

The above amounts include the cost of labor in caring for the hogs and the value of the buttermilk fed for if there is any net expense to the creamery for labor, as it is usually done by the regular force and probably all the profit can be allowed Conn. Farmer.

Operating Creamery Machinery

This one part of creamery work is very often carried on at a great expense to the creamery, because a great many operators lack proper training and skill to operate the machinery as it should be. It is not an uncommon sight to go into the store-rooms or backyard of creameries and see valuable machinery set aside, long before it is worn out. In many cases this is due to a buttermaker who lacked knowledge of operating the machinery, or keeping it in repair. Churns are often worn out where they could be used for years, if proper attention had been given them in due season. Any piece of machinery not properly taken care of will wear out long before it should.

A buttermaker should be able to keep all boxes babbitted and shafts in line, bolts tightened and frictions properly adjusted so as to prevent wear. He should know the mechanical skill to keep the engine and boiler in proper condition.

PACKING A STEAM CHEST

A very good way to pack a steam chest where there is trouble with the packing blowing out, is to take a grain sack and cut your covering out to fit the steam chest packing or plate. Then take a wire door screen and cut it the same size as the sack packing, and lay this packing on the steam chest plate with the screen on top of the sack packing. Use string to tie through holes where bolts go. This will keep the packing in place when you are putting the cover or plate on the chest. A softing the packing should be used for the boys and pistons, especially on old chests, so that it will give and "seat" the worn parts. This will make a perfect fit and stop the leakage. Hemp packing is not good for such places, and should not be used, as it will become burnt and hard, and will wear piston and valve stems, thus causing them to leak. A cross grain-rod garlock packing will insure the best results.

It is a good idea to keep on hand a few cast iron flue plugs in case a flue should spring a leak during the run. These plugs, in case such an accident, can very easily be driven into the flue with a sledge or heavy hammer. A general overhauling of machinery should be kept up, at least once a week, for ordinary machinery kept up in proper shape will run longest, and wear best. The machinery that has been neglected and in consequence has to be replaced is very costly to the creamery.—Butter, Cheese and Egg Journal.

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of the Demo Cream Separator. Think of it. We send this high grade, easy-to-start machine on approval, freight prepaid, to test at our expense. We take all the risk. Prices, from \$18.00 and upwards, about half what you pay for others, and you can be the judge of its merit.

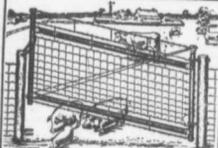
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How about seeing your friends and neighbors now and getting them to subscribe to Farm and Dairy.

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This Gate

Is made of tubular steel of large diameter—far superior to gas pipe or tee or angle iron; and of heavy wire mesh fabric. Will last a life time. Can be raised or lowered, by simple adjustment. Clay Gates are wonderfully light and strong, and always swing true.

Isn't the kind of Gate all good Farmers want as follows: A Gate (1) that won't sag, break, bend, burn, blow down or rot; (2) that is strong; (3) that will raise to lift over snow in winter, that will positively keep back br.-ohy cattle; (4) that will last a life time; (5) that is guaranteed.

Clay Steel Farm Gates

meet all the above requirements. This is why the leading stockmen, with scarcely an exception, have Clay Gates on their farms. They are farmers who once try them, keep them, being delighted with them. The O.A.C. who once have the Experimental Farm at Ottawa, and the Macdonald College Farm, 30,000 Clay Gates were sold in other Gates, they are worth much more.

40 DAYS' FREE TRIAL. One or a dozen Clay Gates will be sent, freight paid, to any farmer willing to try them. Keep them 40 days without expense or obligation. Send size of opening when writing. Send to-day for illustrated price list.



Guarantee
I GUARANTEE every Clay Gate to be free from material faults whatsoever in material or workmanship. If any part of the entire gate which is not my giving out for this reason, I will replace it.

H. RALPH STEELE, Manager

The Canadian Gate Co., Ltd., 29 Morris Street Guelph, Ont.

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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 Makers Department.

Review of Cheese Season

Gardner, Thomas & Co., Bristol, Eng. The cheese season is closing under very different circumstances to those of last year. Then we had just come through a season of burnt up pastures in which the cheese output for the British Isles did not reach, we think, one-third of the normal production. The season now closing has on the contrary been one of plenty. The meadows gave a full crop of grass, and right through the winter the herds have had good feed in the meadows; also there was a good supply of medium quality hay.

Owing to the cool summer of 1912 there was not the usual demand for milk. In our opinion the English considerably above average. The season's New Zealand make too is reported large, many estimates placing it at quite 25 per cent. to 30 per cent. above the corresponding time of last year. The Canadian cheese have not been up to their usual high quality, especially the Quebec section, and these latter have shown surpluses and are badly made. The shrinkage also has been heavy, which seems to point to excessive moisture. There was much excuse for this as the factorymen had made high prices for their early made goods; more than conditions really warranted, and right through the season prices had been well maintained.

Canadian cheese still have the lead in popular estimation, but more care should be taken if they are to maintain their position.

We look for a fairly good demand, for present stocks, though prices must give way as the new season advances. As for some time, in our opinion, prices have been on too high a basis. We look for prices to be maintained about at present values until the new Canadian commence to arrive freely.

A man who will buy a cheese factory and make up milk into cheese so cheaply that his profits will not net him enough for board and clothes, should be put out of the business, for just as long as the factories are filled with this class of men, there is very little chance for improvement in the general quality of cheese. This class of cheesemakers, as a rule, pay their patrons less net profit for their milk than a competent cheesemaker, who receives a half cent more for making cheese.—Daily Record.

How Farmers of Europe Secure Money at Low Rate of Interest

(Concluded from page 10)

It will be noted that all of the discussion at the Conference so far has been on European methods. To wards the close of the last afternoon, Geo. W. Simon, of the Jewish Agricultural and Industrial Association of America, astonished the gathering by telling them that the Jewish farmers of America already have in successful operation a system of credit banks on the Reiffeisen plan. These banks are formed in any community where there are 25 farmers or more. Personal character has been the only basis on which loans have been made, and through the operation of these banks landless men have been put on a manless land.

"What," said Mr. Simon, "could cooperative credit not do for landed men when it does so much for landless ones?" The society that Mr. Simon represented has loaned already

\$1,494,437 to 2,568 farmers. The society has loaned money up to 80 and 90 per cent. of the value of the borrower's property, but the loans have been made only for productive purposes. In 1907 the society collected \$100,000 in interest and principal.

It was not expected that at this first meeting of the National Conference on Marketing and Farm Credits that any of the great problems facing the American farmer would be solved. Hence no definite conclusions were reached as to the best mode of procedure to be followed by the farmers of the United States or of Canada in securing cheap money. But the vast amount of information deduced on the operation of European credit societies will be pondered over by the delegates to the Conference, the readers of agricultural papers represented there, and in time a workable system will be deduced.—F. E. E.

Not a cooperative credit bank has been in successful operation among the French farmers in the neighborhood of Pt. Levis, Que., for many years. We will endeavor to secure the American farmer the benefit of operating the bank for the issue of Farm and Dairy.—Editor.

Items of Interest

A meeting was held on Wednesday morning of this week in Toronto, where representatives of the various dairy associations of Ontario discussed plans for the holding of a Provincial Dairy Show. An editor of Farm and Dairy was in attendance at this meeting, and a full report will appear in next week's issue. On Thursday representatives of the various live stock associations met in Toronto to consider the advisability of holding a National Live Stock Show.

An important part of the poultry work of the Live Stock Branch of the Department of Agriculture, during the past year has been the organization of Co-operative Egg Circles. Ten Circles in all have been organized under the auspices of the branch working in conjunction with the provincial and agricultural college authorities and the Poultry Producers' Associations of Canada. The preliminary work in connection with a number of others has been done, and from present indications it appears that this phase of co-operative work is likely to have a rapid growth in the near future.

Mr. J. Cockle Wilson, Superintendent for Agricultural and Horticultural Societies for Ontario, announces that the annual reports for the Horticultural and Ontario Vegetable Growers' Association are now available for distribution. These reports contain much valuable information, and fruit and vegetable growers not receiving them would do well to drop a card to the Department of Agriculture at Toronto, requesting copies of these reports.

Commencing April 1st, 1913, the commission men, butchers and packers of Toronto Live Stock Exchange will insist upon an allowance of 22¢ a head on all burned cattle purchased, and a reduction of 75¢, on all buck lambs after October 1st, 1913. It is estimated that cattle with horns cost the packers \$250,000 a year in bruises, and beef and packers \$100,000 additional in torn hides.

F. C. Hart, B.S.A., district representative of the Ontario Department of Agriculture in Waterloo Co., Ont., to whom the county council has recently donated an automobile, calls our attention to the fact that the majority of the rural representatives of the county voted in favor of his getting the auto, and not against it, as were reported in Farm and Dairy and other papers. It is evident that Mr. Hart has made a large place for himself in the goodwill of the farmers of Waterloo.



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not alone, because it is the purest and best salt for salting butter. But because it will salt more butter, pound for pound, than any other salt you can use.

The big creameries will tell you this—and show you tests to prove it. The Agricultural Colleges demonstrate this every day.

Every farmer and dairyman—who is getting good prices for butter—is using Windsor Dairy Salt.

It is pure—it makes beautiful butter—it works in quickly—and it is the cheapest in the end. Just try it yourself.

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SECOND HAND CREAM VAT—

Must be in good order. Apply to D. D. ALLAN, - Princeton, Ont.

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We pay the highest city prices for cream delivered sweet or sour at any express office. We supply cans and remit promptly. We have accurate record of each shipment. If 15 years' experience counts, ship your cream to the Toronto Creamery if you can.

If interested you should write us. Toronto Creamery Co., Ltd. TORONTO

Cream Wanted We furnish cans and pay charges. Drop us a card. For reference—Imperial Bank, Ridgeway.—Point Abino Creamery, Ridgeway, Ont.

Stock and Poultry Feeds

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The Best Cheese Vat on Earth

FROM the time we started to manufacture Steel Cheese Vats, we have ever been wide awake to adopt any new feature that would maintain our reputation as Manufacturers of the best Cheese Vat on earth.

Asbestos Lined Steel Cheese Vats

To make our Vats the best heating Vat and the best to hold the heat, that is, to hold the heat longer in the cool season than any other vat made, we are now lining Water and Steam Proof Asbestos Board Lining. To give you an idea what this means to our Vat, we might say its effectiveness in holding heat under vat is twenty times greater than galvanized steel. This Asbestos Board is a non-conductor of heat, is odorless and hygienic, and is absolutely Steam and Water Proof.

It has taken years of experimenting and research to find just what the best retaining powers are concerned. We are pleased with its accomplishment; it means a great deal to the cheesemaker, as it solves one of the problems of the past; it means a vat that will be an everyday joy to him.

While this new Heat-retaining lining costs us considerable money, we have decided to retain our present prices for this season.

Write us for Catalogue and full information. Steel Trough & Machine Co., Ltd., 6 James Tweed, Ont. St. W.



THE habit of looking on the best side of every event is worth more than a thousand pounds a year.—*Johnson.*

Rose of Old Harpeth

By MARIA THOMPSON DAVIES

"Copyright, 1912, The Bobbs-Merrill Company"
(Continued from last week)

I'LL eat both the dinner and supper you have saved when I come back, though it may be late before I get my telegram. Will you be still awake, do you think?"

"I may not be awake, for Stonie got me up so awfully early to help him and Uncle Tucker grease those foolish little turkeys' heads to keep off the dew caps, but I'll go to sleep on the settee in the hall, and you can just shake me up to give you your supper."

"I'll do nothing of the kind, you foolish child," answered Everett. "Go to bed and—but a woman can't manage her dreams, can she?"

"Oo dreams are only little day thoughts that get out of the coop and run around lost in the dark," answered Rose, with a laugh. "I've got a little bronze-top turkey dream that is yours," she added.

"Is it one of the foolish flock?"

Everett called back from the middle of the plank across the spring of the door and without waiting for his answer he strode down the Road. And the smile that answered his sally had scarcely faded off Rose Mary's face when again a shadow fell across the plank. I ment Mr. Crabtree stood in the doorway. Across the way the store was deserted and from the chair he drew just outside the door he could see if any shoppers should approach from either direction.

"Well Miss Rose Mary, I thought as how I'd drop over and see if you had any buttermilk left in that trough you are fattening Mr. Mark for, for the fair in the fall," he said with a twinkle in his merry little blue eyes. And Rose Mary laughed with appreciation at his often repeated little joke as she handed him a tall glass of the desired beverage. "I'm afraid Stonie will get the blue ribbon from over his head if he keeps on drinking so much milk. Did you ever see anybody grow like my boy does?" asked Rose Mary with the most manifest pride in her voice and eyes.

"I never did," answered Mr. Crabtree heartily. "And that jest reminds me to tell you that a letter come from Todd last night a-telling me and Granny Satterwhite about the third girl baby borned out to his house in Colorado City. Looked like they was much disappointed. I kinder give Todd a punch in the ribs about how fine a boy General Stone-wal Jackson have grown to be. I never did hold with a woman a-giving away her child, though she couldn't have done the part you do by Stonie by a long sight."

"Oh, what would I have done without Stonie, Mr. Crabtree?" exclaimed Rose Mary with a deep sadness coming into her lovely eyes. "You know how it was!" she added softly,

claiming his sympathy with a little gesture of her hand.

"Yes, I do know," answered the storekeeper, his big heart giving instant response to the little cry. "And on him you've done give a lesson in child raising to the whole of Sweet-briar. They ain't a child on the Road, girl or boy, that ain't being sorter patterned after the General by they mothers, and the way the wo-



men are set on him is plumb funny. Now, Miss Plunkett there, she's got a little tin bucket jest to hold cakes for nobody but Stonie Jackson, which he distributes to the rest, fair and impartial. I kinder wisht Miss Plunkett would be a little more free with her bachelors, laughed sheepishly at Rose Mary across her butter-bowl.

"When a woman bakes little crisp cakes of affection in her heart, and the man she wants to have ask her for them don't, what must she do?" asked Rose Mary with a little laugh that nevertheless held a slight note of genuine inquiry in it.

"Just raise the cover of the bucket and let him get a whiff," answered Mr. Crabtree, shaking with amusement. "Tain't no use to offer a man no kind of young lolly-pop when he have got his mouth full ed on a nice old-fashioned pound-cake of voice as he and Rose Mary both laughed over the trying plight in which he found his misguided love apple puff now. Howdy, Louisa Helen; come across the plank and I'll give you this chair if I have to."

"I don't wantler make you crack your joints," answered Louisa Helen with a pert little toss of her curly hair as she passed him and stood by

Rose Mary's table. "Miss Rose Mary, I wonder show you this Sunday waist I've done made Maw and get you to light on what she set in the dusk of the night which waited for the voice of God on the waters, and there was she come the dawn of her first day. And in the sunset of the dream she finally ascended the hill toward the Briars with a bucket in one hand and a sunbonnet swinging in the other. But coming down the trail she met one of the big raggedies of life in the person of Stonewall Jackson, who was dragging dejectedly across the yard from the direction of the barn door with Mrs. Sniffer and all her five little dogs trailing in his wake. And as if in sympathy with his mood, the frisky little puppies were waddling along decorously while Sniffer poked her nose affectionately into the little brown hand which was hanging without its usual jaunty swing. Rose Mary took in the situation at a glance and sank down under one of the all-weather shades and looked up with adoring eyes as Tom came and took a spread-legged stand before her.

"What's the matter, honey-sweet?" she asked quickly.

"Rose Mary, quick! It is a lie that I don't know whether I told you. I was curious that I don't hardly think God knows what I did," and the General's face was set and white with his dis-taste.

"Tell me, Stonie, maybe I can help you decide," said Rose Mary with quick sympathy.

"It was one of them foolish turkey hens and Tobe sat down on her and a whole's nest of most hatcherie little turkeys. Didn't nobody know she was a-setting in the old wagon but Aunt Amanda, and we was a-climbing into it for a boat on a stormy sea, we was playing like. It was mighty bad on Tobe's pants, too, for he busted all the eggs. Looks like he just always finds some kind of small and falls in it. I know Miss Potesel's been mad at him. And then in a little while here come Aunt Amanda to feed the old turkey, and she most cried when she found things so bad all around everywhere. And I ran behind the corn-crib, but when I saw her begin to kinder cry I came out. Then she asked me did I break up her nest? She was a-going to surprise Uncle Tucker with, and I told her no ma'am I didn't—but I didn't tell her I was with Tobe climbing in and he hid down first on the top of the old turkey. It don't think like to me it was a lie, but it feels like one right here."

And Stonie laid his hand on the pit of his little stomach, which was not far away from the seat of his pain if the modern usage assigned the corn-plexus be correct.

"And did Tobe stay still behind the corn-crib, and not come out to tell Aunt Amanda? He was sorry he had ruined her turkey?" asked Rose Mary, bent on getting all the facts before offering judgment.

"Yes'm, he did, and now he's mighty sorry 'cause Tobe loves Aunt Amanda as well as being skeered of the devil. He says if it was Aunt Viney he'd rather the devil would get him right now than tell her, but if you'll come lend him some of my briches he will come in and tell Aunt Amanda about it. He's tooken his off and he has to stay in the corn-crib until I get something for him to put on."

"Of course I'll come got some trousers for Tobe and a clean shirt, Aunt and I know Aunt Amanda will be glad to forgive him. Tobe is always so nice to her and she'll be sorry he's sorry, and then it will be all right won't it?" And this with a woman's usual shrinking from meeting the question ethical. Rose Mary sought

(Continued on page 30)

by her if comes the command for light on the darkness of the situation, persuade her some about it for me. I put this little white ruffle in the neck and sleeves and a bunch of it down here under her chin, and now she says I've got to take it right off. Paw's been dead five years, and I've she let it stay?"

"I think it looks lovely," answered Rose Mary, eying the waist with enthusiasm. "I'll come down to let your mother and beg her to let it stay as soon as I get the butter worked. Didn't she look sweet with that piece of purple lilac I put in her hair the other night? Did she let that stay?"

"Yes, she did until Mr. Crabtree noticed it, and then she threw it away. Wasn't he silly?" asked Louisa Helen with a teasing giggle at the blushing bachelor.

"It shure was foolish of me to say one word," he admitted with a laugh.

"But I tell you girls what I'll do if you back Miss Plunkett into that plumb pretty garment with its white tags. I'll go over to Boliver and bring you both two pounds of mixed peppermint and chocolate candy with a ribbon tied around both boxes, and maybe some pretty strings of beads, too. Is it a bargain?" And Rose Mary smiled appreciatively as Louisa Helen gave an eager assent.

At this juncture a team driven

Disciplin

Pearle W

No one can to discipline in the home woman will have accomplishing this sure, it is more than of an affair than of an on those tremor they are "just as can be." Perhaps coived word that to stay over Sun the whole house all the baking is some of the ironi of the wheel other things too tion.

Take a day like women have them warrant the baby's streak and fail to fly, while the older to be seized with spasm of activity. It's just the sort of Junior to take a teasing the cat, c over the floor and out of the book c To illustrate: I was the mother's excit ness react upon the But what can

Discipline in the Home

Pearle White McGowan.

No one can tell how to preserve discipline in the home of another. Each woman will have her own method of accomplishing this. But one thing is sure, it is more a matter of atmosphere than of any set mode or system. To illustrate: On those days when the household machinery runs smoothly and there is plenty of time for each task, the youngsters are invariably good. Isn't that so? It's on those tremendously busy days that they are "just as naughty as naughty can be." Perhaps you've suddenly received word that company is coming to stay over Sunday, and you know the whole house needs sweeping, and all the baking is yet to be done, and some of the ironing left over from the first of the week, besides dozens of other things too numerous to mention.

Take a day like this, I say, and all women have them sometimes, and I'll warrant the baby'll have a fidgety streak and fail to take his nap properly, while the older youngsters are sure to be seized with an overwhelming spasm of activity and contrariness. It's just the sort of day for John Junior to take a fiendish delight in teasing the cat, or to cut paper all over the floor and pull all the books out of the book case to build a house with. In just such ways as these does the mother's excitability and nervousness react upon the children.

But what can one do, you say?

Those busy days will come. There is only one thing to do, and that is to first get a firm grip upon one's self, remembering always that family discipline begins with the mother's control of herself. One must face such trials coolly and courageously, with as much calmness as can be mustered, remembering often that only one thing can be done at a time anyhow, and thus not try to load everything upon one's shoulders at once.

Again the wise woman will not talk

to see whether you will keep them or not.

And then again, don't make rules. They bind one to take notice, and hinder in ruling wisely and adjusting different situations as they arise.—Farmers' Review.

Some Helpful Laundry Hints

Saturate grass stains thoroughly with kerosene, then put in the wash.

Soak ink stains in sour milk. If a dark stain remains, rinse in a weak solution of chloride of lime.

Wash iodine stains with alcohol, then rinse with soapy water.

Soak iron rust stains thoroughly with lemon juice, sprinkle with salt and bleach for several hours in the sun.

Hot water and soap generally remove greases spots.

Soften pitch, wheel grease or tar stains with lard and soak in turpentine. Scrape off all the loose surface dirt with a knife, sponge clean with turpentine and rub gently until dry.

Soak mildew in a weak solution of chloride of lime for several hours and wash with cold water and soap.

To remove scorch stains, wet the scorched place, rub with soap and bleach in the sun.

Wash chocolate and cocoa stains with soap in tepid water.

To remove fruit stains, stretch the fabric over the mouth of a basin and pour boiling water on the stain.

How kindness brightens and beautifies the home. As the gentle breezes, the warm showers, the sunshine of the springtime all call forth vegetable life and fruitfulness in nature, so kindness brightens, beautifies, and enriches the home life, filling it with the sweetest peace and joy, memories that are more precious than the contents of an alabaster box

much about her difficulties, and what she does say will be tempered with wisdom. For instance it makes all the difference in the world on such a day whether a woman says to her children, "Mother has a big lot of work to do to-day." I wonder who's going to help me by being very thoughtful and careful?" or "Pop pity's sake, I hope you children will be good and not bother me to-day, for I'm so busy I don't know what to do."

The first arouses their helpful instincts. If they are old enough they

to their own and their mother's tempters.

EXPECT THEIR BEST

Therefore it is always wisest on these hurried days to first get one's self well in hand, then expect the best from each child, taking time to encourage him in doing that "best," and nine times out of ten that is what one will get from him.

Then don't threaten. That's so easy to do when one is hurried, and flustered. But threats tend only to make a child rebellious, and rouse his desire



Note the Color of *your* flour—
And the Bread it makes for you.
Delicately *creamy* is FIVE ROSES flour.
Because it is *not bleached*, don't you see.

Clear—Immaculate—Desirable.
A pure Manitoba wheat flour—FIVE ROSES.

And the healthy sun-ripened spring wheat berries are *naturally* of a golden glow.
And the meaty heart of the polished kernels is *creamy*.

Milled from this cream, FIVE ROSES is delicately "creamy."

The only *natural* flour from Manitoba's prime wheat. Which gets whiter and whiter as you knead it.
And your bread is most appetizing, *unusually* attractive in appearance.

Looks good.

And is good.

Bake this purest unbleached flour.

Five Roses Flour

Not Bleached



Not Blended

GRANGE NOTES

Interest Shown in Hydro Power

Mr. James N. Futcher was sent to Toronto in the interests of the members of Apple Grove Grange to attend the meeting of the Commission of Hydro-Electric power held recently. The delegation from the southern counties on Lake Erie was a large one and they were assured that before many years Hydro power would be within the grasp and means of every farmer who would require it.

Mr. Buchanan, Representative of Elgin, was present by invitation at the meeting of Middlemarch Grange on Friday night, speaking on insects, some of the members bringing specimens of apple tree blight for information. At the previous meeting Miss Robinson, gave an illustrated address on "David Livingstone, His Work and Character," after which the annual sugar social was indulged in. Two new members were initiated into the mysteries of the order.

The following clipping is from the St. Thomas Times:

An interesting meeting was held at Forest Rose Grange recently. The subject of alfalfa was ably handled by J. C. Orr, of Talbotville, who told of the wonderful properties of this valuable forage plant. Mr. Orr has made a success of growing alfalfa, and has had some very large yields of the very best quality of hay, which is greedily eaten by every kind of animal and fowl on his pure-bred stock farm. He told of sheep becoming too fat to be useful, and of cattle doing exceptionally well on a diet of alfalfa. The selection and preparation of a well-drained field, the choice of home-grown seed of a hardy variety, the sowing with a light nurse crop of barley, the care during the following season, and the methods of harvesting, were points well covered in Mr. Orr's address.

An interesting discussion among those present, who had experience in the culture of this clover, took place during the evening. Some had found that most of their last year's seedling had been winter-killed, but they were

THE only men who build institutions are the men who are true to their women, true to their children, true and loyal and reverential toward old age.—*Elbert Hubbard.*

going to try again. Altogether the evening was well spent, and a hearty vote of thanks was tendered Mr. Orr for his lecture.

Elgin county grangers are quite willing to give grangers of other counties due credit for the good work they are doing, but when it comes to publishing a photograph of the members of the Elgin County Grange and stating underneath that some of the people whose likenesses appear, come from Essex county, it is more than the Elgin county people will stand for. Such a mistake occurred in Farm and Dairy, April 17. On the front cover was a group photograph of the officers of the recently organized Elgin County Grange, not Essex as there stated. It makes the editor feel like employing a first-class kicking machine when mistakes such as this occur.

I read Farm and Dairy every week and especially enjoy the Poultry Department.—Mrs. G. Stamford, LaShute, Que.

Care of Lamps

A manufacturer of lamps has the following to say in regard to their care:

"The reason lamps smell and give poor light is because they are not kept clean, or because the wick is poor or clogged by having been used too long or else the chimney is wrong."

"A lamp should be cleaned, trimmed, and filled daily. Trim by rubbing the char off the wick. This may be done by a wick trimmer, but be careful. Wick should never be cut evenly. It is impossible to do it evenly. Keep the tin holes in the floor of the burner clear for draught."

"Lamps should never be quite full, because the oil expands with heat, and if there is no escape then an explosion is liable to take place."

ANY man and every man who talks out of his heart, and talks about the things he has done and that he knows, is always eloquent, always effective, always convincing. *Elbert Hubbard.*

"Boil the burner in strong soda water once a month and empty the float whenever any sediment appears. Light a lamp with the wick turned low. Gas is very quickly generated if the wick is turned high at once, and there is, too, more danger of the chimney breaking."

About Washing Bed Clothes

Mrs. W. C. Palmer. To wash blankets, quilts and comforters, choose a warm sunny day so that they will dry as quickly as possible. Use soft water if it can be obtained.

Woolen blankets should be washed in luke warm water, never in hot or cold water as it shrinks them. Use a good white soap or some reliable woolen soap. Put the blankets to soak for 15 minutes in warm water, soap the blanket as it is put in the tub, putting on a little extra soap where the blanket is most soiled. After rinsing to soak, work the blankets around in the tub, rubbing between the hands and applying more soap where needed. Souse the blanket several times and wring into another warm water, going over the blanket in the same way as blankets are wrung missed. Rinse a second time wringing the blanket as free from water as possible. Shake well before hanging up to dry. Roll each corner a trifle and pin with a safety pin to prevent the corners from slipping out. When dry they will be fluffy and soft, ready to fold away for another winter. Another way is to stretch the blankets on a certain stretcher, putting them on double.

Never rinse comforters in cold water as it tends to harden the cotton batting. Comforters are washed in the same way as blankets only the water should be fairly hot and they should soak a couple of hours in good hot soapy water to loosen up the dirt. The ends or any parts may be rubbed on a washboard or washed in the washing machine. After the comforter, are dry, roll and beat with a smooth round stick. This will loosen up the cotton and make the comforter more fluffy.

Wash quilts the same as the comforters except that where the corners will not run they should be staided to make them more clear and fresh.

Farm and Dairy is certainly a paper brim full of useful information for farmers and agriculturists.—George Yeo, Oxford Co., Ont.

Buy from the Factory

Here's a chance for you to buy your range from the factory and save 30%—to buy it on easy terms and to get the very range you would choose, even if you had to pay the retail price.

Your free book shows you exactly what the range is like. It describes each part clearly, and we guarantee our range to be just as represented.

You might as well save the retail profit. Mail the coupon to-day.

Dominion Pride Range

Polished steel body—unbreakable doors and casing—beautifully nickelled

Cash or Credit We Pay Freight

Canada Malleable & Steel Range Mfg. Co., Limited, Oshawa.

Please send Book. Name _____ Address _____

HARTSHORN SHADE ROLLERS

Original not imitated. Wood of the rollers "Empagor" requires no tacks. Signature on roller.

Situations Wanted

Experienced Farm Hands and Married Couples require positions. Send particulars with stamped addressed envelope for quick reply!

FARM EMPLOYMENT AGENCY

140 Victoria Street, TORONTO

Capable Old Country Domestic

Parties arriving April 21st and 28th, and weekly after

APPLY AT ONCE
The Guild, 71 Drummond St., Montreal and 47 Pembroke St., Toronto

This Engine Runs on Coal Oil

Every farmer can afford an Ellis Coal Oil Engine. They give far more power from one fill of coal than other engines do from gasoline. They are safe, as well as cheap; no danger of explosion or fire.

The strongest and simplest farm engine made; only one can run it without experience. Thousands of satisfied customers use these engines to grind feed, saw wood, run pumps, thrash, run cream separators, and do many other jobs. Cheaper than horse or hired man. Fill up the tanks and start it running, and do further attention if necessary; it will run till you stop it.

FREE TRIAL FOR 30 DAYS. You do not have to take our word for it. We'll send an engine anywhere in Canada on Thirty Days' Free Trial. We furnish full instructions for testing on your work. If it does not suit you, we'll pay back at our expense. We pay freight and duty to get it to you, and we'll pay to get it back if you don't want it.

Absolutely guaranteed for 18 years. Write for free catalog and opinions of satisfied users. Special offer in new territory.

5 to 15 horse-power We pay Duty and Freight

Ship All the Wool

and get longer, better wool that will bring the highest price. You can easily net from the 200 more an every sheep than you can from the old way. Don't lose your wool. Don't have your wool soiled and disfigure your sheep with unclean shearing. Take off the fleece smoothly and quickly in one unbroken blanket with a

Stewart No. 9 Shearing Machine

It's the most perfect hand operated shearing machine ever devised. It has built-in rollers that grip the wool on the neck and throat, and pull it through the cutters. Complete, including four ground shearer patterns. The patented Stewart No. 9 is the best shearer ever made. For balance, terms, hearing and Home-Clipping Machine, write to:

CHICAGO FLEXIBLE SHIRT CO.
720 North La Salle St., CHICAGO, ILLINOIS

Send us \$1.00

Receive by return mail two dresses for little girls, age 4 to 8; age 10 and 12. 75c each; for boys with collar, emmerette, in red, cream and navy. Beautifully made, just as pictured. Add the cost for postage.

STANDARD GARMENT CO., LONDON, ONT.

GRAND TRUNK RAILWAY SYSTEM

HOMESEEKERS EXCURSIONS

To: MANTOBA, SASKATCHEWAN AND ALBERTA

each TUESDAY until Oct. 23 inclusive. Every TUESDAY until April 23rd, inclusive, from stations in Ontario to Fort Winipeg and return \$3.00 EDMONTON and RETURN \$3.00

Proportional low rates to other points. Return, limit two months.

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To ALBERTA AND SASKATCHEWAN Every TUESDAY until April 23rd, inclusive, from stations in Ontario to Fort Winipeg, Portarbert and West, at very low rates.

Through coaches and Pullman Tourist Sleeping cars operated to WINNIPEG without change, leaving Toronto above dates.

The Grand Trunk Pacific Railway is the shortest and quickest route between Winipeg-Saskatoon-Edmonton.

Berth Reservations and particulars from Grand Trunk agents.

OUR FARMERS' CLUB

Correspondence Invited
PRINCE EDWARD ISLAND

RICHMOND, April 21.—The weather for the past three weeks has been favorable for farm work. The roads are impassable for stock traffic. Milk cows and other cattle command high prices. The poultry market is very active. A large number were present. He spoke of the poultry and marketing of the flock. It was decided to meet at the close. Mr. Benson is to return an official arrangement.—J. D. M. L.

QUEBEC

SHERBROOKE CO. QTE. LENOXVILLE, April 21.—Spring has opened early and the outlook for agriculture is good. Prices still hold high. Looking for good produce, and farmers are getting ready for the season. The work of the Meadowlark College is much appreciated by the farmers. Lower prices have been to the good effect. The yield of wheat is about the average, and the quality is also good. The crop is well covered but there was a loss to the wheat crop.—H. M.

ST. CYPRIEN CO. QTE.

TRIPLET, April 19.—Farmers are very pleased. Maple sugar is out, and a very good season. Hay is very good. The stock is doing well, with plenty of food and straw. The land is splendid. The yield of wheat is about the average. The quality is also good. The crop is well covered but there was a loss to the wheat crop.—A. P.

RICHMOND CO. QTE.

DANVILLE, April 19.—The weather is all right and the roads are drying up. It is now cold, and it is not so hot as it was. The farmers are very successful. The yield of wheat is about the average. The quality is also good. The crop is well covered but there was a loss to the wheat crop.—H. M.

ONTARIO

WATERLOO CO. QTE. Waterloo, April 19.—The weather is drying but not so hot as it was. The farmers are very successful. The yield of wheat is about the average. The quality is also good. The crop is well covered but there was a loss to the wheat crop.—H. M.

ERIE VIEW CO. QTE.

WATERLOO, April 19.—The weather is drying but not so hot as it was. The farmers are very successful. The yield of wheat is about the average. The quality is also good. The crop is well covered but there was a loss to the wheat crop.—H. M.

WARTON CO. QTE.

WARTON, April 19.—The weather is drying but not so hot as it was. The farmers are very successful. The yield of wheat is about the average. The quality is also good. The crop is well covered but there was a loss to the wheat crop.—H. M.

MANOR FARM HOLSTEINS DOING THINGS.

It was the great measure of one of the editors of Farm and Dairy to call at the Manor Farm last week. Mr. Gordon S. Gooderham is the owner. He is a very successful farmer. He has a large number of Holsteins. He is very successful in his business. He is a very successful farmer. He is a very successful farmer. He is a very successful farmer.

7 days, another, Queenie L., 56.67 lbs. butter in 7 days. Mr. Gooderham had but two bull calves when he saw them and they are dandies. One of them he has since sold to Mr. Arthur Kelly of Vanessa, Ont. The other he has advertised again this week in the Manor Farm. Mr. Kelly, of Vanessa, has gotten a real bull in the name of Queenie L., 56.67 lbs. butter in 7 days. He is a very good bull. He is a very good bull. He is a very good bull.

In the tables we noticed the cow of Mr. J. H. O'Leary, recently purchased by Mr. J. H. O'Leary. Mr. O'Leary has gotten a great foundation of milk in one month and 14 days, and 72 to 74 lbs. butter in 14 days, and made 23.55 lbs. butter in 7 days, and 45.76 lbs. butter in 14 days. She is a very good cow. She is a very good cow. She is a very good cow.

CANADIAN RECORD OF 33.17 LBS. BUTTER.

This Friesland cow is the hub of the Holstein interest of Canada, is so made out by recent official tests carried on at the Manor Farm. The cooperation and good feeling existing between the two countries is a very good thing. It is a very good thing. It is a very good thing.

NEW YORK

Did you know that my great herd sire, Prince Hengerveld of the Pontiacs, has for a sister, "Spring Farm Pontiac Lass," No. 106812, which recently made the world's record, and a most phenomenal one, of 44.152 lbs. butter in 7 days.

44.152 lbs. butter in 7 days

She did this in last 7 days of her 30-day test; in the 30 days she made over 171 lbs. butter, and for over 100 days her milk averaged 6.2% in butter fat.

FOR SALE—One bull calf sired by above bull and out of Mercena of Campbelltown, 23.57 lbs. butter a 3-year-old, you can see in my stables the dam, the granddam, the sire, and sire's dam of this bull calf!

He is a great buy is nicely marked, strong, straight, and of great depth, with a very strong in the bone, is well carried out and straight behind. He is a big calf. YOU HAD BETTER COME AT ONCE TO SEE HIM, or write.

No. 2, out of Queenie L., 5.25 % fat, and as advertised last week in Farm and Dairy, I have just sold to Mr. Arthur Kelly, Vanessa, Ont.

Kindly bear in mind that who is invited to visit the Manor Farm, where the Holsteins will be delighted you, they having records up to nearly 30 lbs.—one Lady Vincent, 29.56 lbs. butter in seven days.

GORDON S. GOODERHAM

The Manor Farm - Bedford Park, Ont.

HOLSTEINS HOLSTEINS

INKERMAN DAIRY FARM

Offers in HEIFERS, raising 1 yr. old in HEIFERS, raising 2 yr. old. Bull rising 1 yr. old, sired by son of A. Bull and Heifer calf. Pur-phons in pairs not akin. Write, W. M. HIGGINSON, INKERMAN, ONT.

Ourville Holstein Herd

Bull of servicable age all sold. If you want them from here we would advise you to buy young. Only two 20-months Sir Abbot's and from 23.17 lbs. milk in 7 days. Both are by Dutchland and 23.06 lbs. 4-year-olds. Grand individual 4 months old. LAIDLAW BROS., Avlmer, Ont.

Avondale Stock Farm

A. C. HADY, PROPRIETOR. HERD SIRE. Prince Hengerveld Pontiac, 32.83 (50.32). Sire, Fletie 2nd Woodstock Lad. Dam, Princess Fletie De Kol, A. R. O., 33.62. Highest record of Hengerveld De Kol. King Pontiac Artis Canada, 18.42 (72.94). Sire, King Pontiac, 18.17 lbs. butter 7 Daughters of Hengerveld De Kol. We are offering bulls from these great sire and high record dams, and also a limited number of cows in calf to them. No better calf than the best bred KORNITZ anything that you want of first-class Holsteins.

FAIRVIEW FARMS HERD

Offers Sons of PONTIAC KORNITZ ready for service in the near future or younger, sons and daughters of COLANTREA GLADI, whose three first daughters to be officially tested average better than 23 pounds each. Junior DYER 27th the greatest bred KORNITZ anything that you want of first-class Holsteins. E. H. DOLLAR, HEUVELTON, (Near Prescott, Ont.) NEW YORK

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GORDON S. GOODERHAM

The Manor Farm - Bedford Park, Ont.

HOLSTEINS

YOUNG COWS AND HEIFERS HOLSTEINS of different ages. Safe in calf to a son of the great bull De Kol, the 2nd's Bull Boy, the 3rd's Tearing Heifer, and Heifer and Bull Calves for spring delivery. Write for prices. W. W. GEORGE, - CRAMPTON, ONT.

Herd

"KING SEG'S PIETERTJE" Bred by Meyer, Syracuse, N.Y. "FINDERN KING MAY FATNE" Bred by Myers, Findern, N.J. These two sires average over 32 lbs. for 7 days official test. Get your next young bull from my herd—best by either One animal or carload lots (Farm only 40 cents from station) Write: L. H. LIPSTIT, Stratfordville, Ont. Proprietor, Forest Ridge Holstein

Purebred Registered HOLSTEIN CATTLE

The Greatest Dairy Breed Also as FREE TRADE MARKS Holstein Friesland Assn. No 148 Bantlers V

LAKEVIEW HOLSTEINS

We are now testing some of the daughters of Count Hengerveld Faysse De Kol, and they are running from 16 1/2 lbs. with half calf to 22 lbs. with second calf. There are still a few We are offering bulls from these great order to make sure. They are offered at half their value, in by Dutchland Colantrea Sir Home. Come to the farm and see the dams of these bulls and their dams. B. F. OSLER, - BRONTE, ONT.

NEW YORK

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GORDON S. GOODERHAM

The Manor Farm - Bedford Park, Ont.

EGGS, BUTTER and POULTRY

For best results ship your live Poultry to us, also your Dressed Poultry, Fresh Dairy Butter and New Laid Eggs. Eggs cases and poultry crates supplied.

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The **Wm. DAVIES Co.** Ltd.
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Selected Seed Potatoes

Improved Empire State, a blight resistant strain, very heavy yielder and less liable to rot than ordinary stock. \$1.35 per bag. Satisfaction, also blight resistant, and Delaware (or Green Mountain), \$1.15 per bag.

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Build Slabs, Swelling, or arches, and all kinds of Concrete Block. The London and Windsor Concrete Block Machine makes every kind and size of block. High and Moderate price. We manufacture a full line of Concrete Machinery. Tell us your requirements.

LONDON CONCRETE MACHINERY CO.
Dept. B., London, Ont.



SYNOPSIS OF DOMINION LAND REGULATIONS

Any person who is the sole head of a family or any male over 18 years old, who has homesteaded a quarter section of available Dominion land in Manitoba, Saskatchewan, or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any agency on certain conditions by father, mother, son, daughter, brother, or sister of intending homesteader.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within five miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother, or sister.

In certain districts a homesteader in good standing may preempt a quarter-section alongside his homestead. Price, \$100 per acre.

Duties—Must reside upon the homestead or pre-emption six months in each of six years from date of homestead entry (including the time required to carry homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price, \$100 per acre. **Duties**—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. OBY,

Deputy of the Minister of the Interior.
N.B.—Unauthorized publication of this advertisement will not be paid for.

GASOLINE ENGINES

11 to 20 H.P.

Stationary Mounted and Traction



WINDMILLS

Grain Crushers, Water Pumps, Steel Saw Frames, Pumps, Tanks, Etc.

GOOLD, SHAPLEY & MUIR CO., LTD.
Brandon Winnipeg Calgary

Finish This Story

A WORKMAN in an IHC wagon factory was explaining the various stages of wagon construction to an interested visitor. He picked up two pieces of long leaf yellow pine, which to all appearances were sawed from the same board, and asked the visitor to notice the difference in the weight of the two pieces. The lighter piece, he explained, was kiln-dried. The heavier piece was air-dried and more thoroughly seasoned. It had retained the resinous sap which adds strength and toughness, while in the kiln-dried piece of lumber this sap had been drawn out by the too rapid application of heat.

Every Stick of Lumber Used in IHC Wagons is Carefully Selected, Air-Dried Stock

Here was something to think about. The visitor asked for a test as to the relative strength of the pieces of wood. The air-dried piece held up under nearly double the weight under which the kiln-dried piece of lumber broke. The workman explained how the comparative life of air-dried and kiln-dried lumber has about as great a difference.

To the eye there was no difference between these two pieces of lumber, but when put to



the test there was a vast difference. So it is throughout the construction of IHC wagons—Petrolia, and Chatham. They are built for real strength, light draft, and satisfactory service.

After seeing the care used in the construction of every part of an IHC wagon, the visitor asked: "Why don't you let people know of the great care used in selecting material and in constructing IHC wagons?"

This is what we have been trying to do, but we cannot tell it all in one short advertisement. IHC local agents handle the wagons best suited to your work. See them for literature and full information, or write the nearest branch house.

International Harvester Company of Canada, Ltd.
EASTERN BRANCH HOUSES

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.;
Ottawa; Ont.; St. John, N. B.; Quebec, P. Q.
Built at Chatham and Petrolia, Ont.



Fertilizers Lowest prices given on best grades of commercial fertilizers. Complete fertilizers, Nitrate of Soda, Potash, Superphosphate, etc. Write us of your needs and ask for prices.
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Send us your address and we will show you how to make \$3 a day sure. We will send you a copy of our book, "How to Make \$3 a Day Sure" and we will guarantee you \$3 a day for 30 days. If you do not like it, we will refund you the money. Write us today. No money needed. Write to: THE NATIONAL AUTO MANUFACTURING CO., Box 1139, WINDSOR, ONT.

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Now that the long evenings are here plan to improve your time by reading. Get a Book Catalogue Free from FARM AND DAIRY. All Books at Lowest Prices

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OR send your name and address for a free copy of the book that has opened the eyes of Canadian farmers to the possibilities of the "material-of-all-work"—concrete.

This book,

"What The Farmer Can Do With Concrete"

will be sent to you absolutely free. You do not place yourself under the slightest obligation to buy any "Canada" Cement or to do anything else for us.

YOU will find the book interesting, instructive, and its information will be of real cash value to you. It is not a catalogue. It gives in plain, simple language the directions for using concrete for every possible kind of farm construction. Scores of every day uses, fully described and illustrated.

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If you are using concrete and wish to ask any questions about its use, remember we have a Farmers' Free Information Bureau that will answer them without charge.