

Issued Each Week—Only One Dollar a Year

VOL. XXX.

NUMBER 28

FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

JULY 13,

1911.



DON'T EXPECT GOOD CORN UNLESS YOU CULTIVATE IT WELL AND OFTEN

From this time forward the success of the corn crop is dependent to a great degree upon the cultivation it is given. During hot, dry weather, the soil between the corn rows ought frequently to be stirred and kept level—not torn up deep and rough, which will unduly and greatly waste the soil moisture so necessary to the proper growth of the corn. Moisture is the important need of the growing corn, so take care to conserve as much moisture as possible by frequent, shallow cultivation from this time on; and let not weeds or grass flourish amongst the corn to rob it of the vital moisture! The photo for our illustration this week was taken on Mr. John Durst's Farm, Huron Co., Ont.

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BETTER FARMING AND
CANADIAN COUNTRY LIFE

Two Leading Features

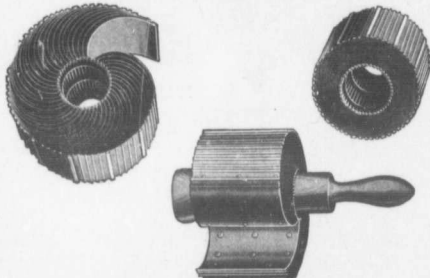
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CREAM SEPARATORS

1. The Link-Blade Skimming Device
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Note the Principal Advantages of the Above-Mentioned Features:—



The Link-Blades closed for skimming, open for cleaning and held by standard for convenience in cleaning.

1. Increased capacity of from 30 to 50 per cent. over the most efficient of previous devices, combined with very clean skimming under a wide range of conditions as to milk, temperatures, etc.

2. Great convenience in cleaning and handling, because the blades do not come apart, and do not have to be re-assembled in any particular order.

3. The device being expandible, and fitting the bowl snugly, it can never become loose, or shift in the bowl, and throw the same out of balance.

4. The pressure being transmitted through a series of brass rivets, there is no strain on the blades themselves, and there is no rusting formed by the points of contact of the rivets.

5. The device, being much more efficient, is a great deal lighter and smaller in order to do the same amount of work, making it still easier to handle, and requires less power to run than other devices of same capacity.

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Greatest Live Stock Show on the Continent

SPECIAL PRIZES: \$800.00 for Best Animal in Holstein Classes.
\$500.00 for Best Animal in Shorthorn Classes.

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For Prize List and Information write

J. O. ORR, Manager, City Hall, TORONTO

Mr. Flatt Submits Some Figures.

Editor, Farm and Dairy.—When glancing over Farm and Dairy of June 29th issue I notice an article written by John McKee, one of our leading Ayrshire breeders. I wonder what is the trouble with Mr. McKee and with some other Ayrshire breeders that they are trying so hard to knock the Holstein cow? Perhaps it is the fact that a grade Holstein at public auction will sell for nearly as much as their registered Ayrshires; or is it the wonderful advances the Holstein cow is making entirely on her own merits? She seems to be the thorn in the flesh of some of our Ayrshire admirers.

Mr. McKee sounds another note of warning to beware of those Holstein cows for they will consume everything in sight. From hearing Mr. McKee one not informed in these matters would imagine an Ayrshire cow would hardly make a meal for a Holstein.

It might not be out of place to suggest to the Ayrshire knockers to pay more attention to the improvement of the weak places in their favorite cattle and let the other follow alone. The intelligent dairy farmer of to-day is not guided by fault finders through the public press but wants cows that will give most satisfactory returns from feed consumed and labor expended, and from present indications and past experience I am confident their ideal in the Holstein cow.

ADMISSIONS AND CLAIMS.

We all admit the good qualities and tidy appetites of the Ayrshire bossie, but the 20th century is an age of big things, and, strange to say, we must in every instance couple the name of a big, vigorous, healthy Holstein with every milk and butter record of the world. We Holstein breeders also admit and appreciate the vigorous appetites of our mortgage lifters. They are capable of consuming large quantities of roughage and converting it into milk, and what we most admire, is that her milk and butter fat production is corresponding larger than her consumption of food (in comparison to other dairy breeds).

As the Holstein cow has demonstrated that she is superior to all others in the production of milk and butter fat and as the Ayrshire admirers' only remaining prop is the claim they make for economical production, it is the earnest prayer of the Holstein fraternity that the Ayrshire men allow the cheap production bluff to be tested on its merits by bringing representatives of both breeds together in public test, weigh and value all feed and pool the money, winners to take all, and then I fear the nervous little Ayrshire bossie with her tiny tests will have lost her last claim to first place among the dairy breeds of cattle.

SOME TELLING FIGURES.

To further substantiate my arguments I will submit a statement of food consumed by one of our registered 4-year-old Holstein heifers.

Jennie Bonerages Ormsby, who has just completed a 30-day official record of 125 1/2 lbs. butter from 2,580 lbs. of milk; also her 7-day record is 30.76 lbs. butter.

Her daily ration was as follows:
10 lbs. bran worth 9c.
4 lbs. corn chop worth 5c.
3 lbs. oat chop worth 4c.
2 lbs. oil cake worth 3c.

19 lbs. meal worth 21c a day, or \$6.30 for 30 days.

In addition to this she received all the green grass she would eat, and I think that a liberal allowance for this during the month, making \$10.80 total cost of food for 30 days. She produced 2,580 lbs. of milk worth, wholesale at Hamilton, at 16c a gal., \$41.28, leaving a nice balance of

\$30.48 for caring for one Holstein cow for 30 days.

Smile and the world smiles with you. Knock and you go alone.

The chief credit will let you in. Where the knocker never known.—D. C. Flatt & Son, Wentworth Co., Ont.

Thinking—Not Doing

Editor, Farm and Dairy.—I noticed an expression in Farm and Dairy recently regretting that farmers so often let others do their thinking for them. My experience among farmers is that they do the thinking all right, but the trouble too often is they let others do the acting for them.

If they would only do as well as they think, rural Canadians would be nearer getting what they are entitled to. Success to you.—W. K. MacLeod, New Westminster District, B.C.

Fair Dates for 1911

Canadian Industrial Exhibition, Winnipeg, Man. July 12 to 22
Inter-Provincial Fair, Brandon, Man. July 24 to 28
Dominion Exposition, Regina, Sask. July 31 to Aug. 12
Canada National Exhibition, Toronto, Ont. Aug. 26 to Sept. 11
Nova Scotia Provincial, Halifax, N. S. Aug. 30 to Sept. 7
Canada Eastern Exhibition, Sherbrooke, Que. Sept. 2 to 9
Western Fair, London, Ont. Sept. 8 to 16
Central Canada Exhibition, Ottawa, Ont. Sept. 8 to 16
Fredericton Exhibition, Fredericton, N. B. Sept. 16 to 23
P. E. I. Provincial, Charlottetown, P. E. I. Sept. 26 to 29

Some Pertinent Questions

Editor, Farm and Dairy.—Country newspapers from one end of Canada to the other have for some months now been publishing articles opposing reciprocity and pointing out wherein the industry of agriculture will receive a serious setback should reciprocity pass. We should stop to think where these articles come from and who pays for the large advertising space used.

Why have our protected interests taken such a sudden—a new—interest in the farmer's welfare. As far as I can see, formerly their chief interest was to make as much money out of us farmers as possible. And that is still their chief interest, and it is an explanation of their bitter animosity to the proposed reciprocity pact. They fear that we farmers will get out of the tariff corral.—E. F. Eaton, Colchester Co., N. S.

Items of Interest

The second annual report of the Commission of Conservation has been received. A vast fund of informatics with which every Canadian should be in touch, is contained in this report, which may be had on application to James White, Secretary to the Commission, Ottawa, Ont.

Mr. W. H. Bunting, of St. Catharines, has been engaged to conduct an enquiry into the fruit industry in Canada, the information collected will be presented at the Dominion fruit conference next winter. The acreage devoted to fruit in the Dominion, and the production and distribution of the crop will be studied.

Prof. F. C. Harrison, former bacteriologist at Macdonald College, St. Anne's-Bellefleur, has been appointed principal of the college, the position vacated by Mr. Jas. W. Robertson.

Have you forgotten to renew your subscription to Farm and Dairy?

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Vol. XXX.

FOR WEEK ENDING JULY 13, 1911.

No. 28

WHAT SCIENTIFIC BUSINESS AGRICULTURE HAS DONE FOR HAWAII

An Old Peterboro Boy Pays a Visit to the Land of His Youth, and Recounts to the Editors of Farm and Dairy Some of the Wonderful Profits From Scientific Farming on Islands of the Pacific Ocean

FARM land in the Hawaiian Islands sells for \$500 to \$600 an acre. On the larger plantations annual dividends of 60 per cent. on the original capital is the common return. Science enters largely into the management of the farms and commercial fertilizers are applied in enormous quantities, such as would startle a rural Canadian. Recently the editors of Farm and Dairy were honored with a call at their office in Peterboro by Mr. Henry G. Boswell, of Honolulu, Hawaii, a former Peterboro county farm boy, who has spent the last 20 years in the Hawaiian Islands and is back in Canada to pay a visit to the place where he grew to manhood. Some facts in regard to the agricultural practices in these productive islands of the Pacific Ocean, are of special interest to Canadian farmers, and since we farmers with profit may draw many lessons from them, the facts as given by Mr. Boswell in conversation, and substantiated by the Hawaiian government literature, are here briefly reviewed for the benefit of Farm and Dairy readers.

RESULTS OF SCIENTIFIC AGRICULTURE

Science has worked wonders on the agriculture of the Hawaiian Islands. The liberal application of commercial fertilizers, crops especially adapted to the soil and climate, proper methods of tillage, up-to-date equipment in all departments of the farms and the placing of large areas under the management of one most capable head, have made immense profits possible, has created many millionaires, and has placed the laboring classes in receipt of good wages and comfortable living.

Mr. Boswell, after 20 years away from Canada, and the conditions as he knew them on the farms in the olden days, was not given to speaking in kindly terms of any progress that had been made during that period by our farmers. In fact, he stated it as his opinion that our farms rather than progressing had fallen backwards, our crops were inferior in yield to what they used to be—and Mr. Boswell was not slow in arriving at a conclusion as to the cause.

A REFLECTION ON US FARMERS

"Your Canadian farmers are too easily satisfied," said Mr. Boswell. "They continue to grow the crops their fathers used to grow. They take these crops without an adequate return to them in the way of fertilizers, and few if any of them keep accounts. This is a deplorable state of affairs, and it need not be.

"There are great possibilities in the soil if we will but grow the most profitable crops that are fit and adapted to our soils, if we will fertilize and adapt ourselves as best we can to conditions as we find them and place our farms upon a business basis, keep accounts, and know, not guess, as to the profitability of each and every department of the farm each year."

EXPENSIVE EXPERIMENTAL WORK

According to Mr. Boswell everything about the farms or plantations on these Hawaiian Islands is reduced to a business and scientific basis. Much money is expended in experimental work. Individual farmers conduct experimental plots for

themselves, the Planters' association expends large sums experimenting with commercial fertilizers and various methods of crop management, and the government also carries on much work of an experimental nature seeking to assist the farmers and make possible a maximum of crop production on the islands.

The main crop is sugar—the sugar cane. Pine apples and other tropical fruits also enter largely into the agricultural production. The soil is volcanic in nature, and the climate being dry, irrigation is practised. Practically all the water used for irrigation has to be pumped and at great expense, since often it has to be elevated 600 feet and more. On the large plantation with which Mr. Boswell is connected 80,000,000 gallons every 24 hours are pumped and elevated 600 feet for irrigation purposes. The pumping machinery on this one plantation alone represents an investment of \$1,000,000.

HISTORY OF HAWAIIAN AGRICULTURE

It was interesting to hear Mr. Boswell tell the history of agriculture in these islands. Here are

Best in the Country

I receive Farm and Dairy regularly. It is a good, interesting and useful paper: the best I have had the pleasure of subscribing for, since coming to this country, some six years ago. I have had quite a number of farm papers since then. I like Farm and Dairy the best. I shall certainly renew my subscription when it is due.—John Roy, Winnipeg, Manitoba.

his words: "Sixty years ago our Islands were inhabited by a semi-barbarous people. They grew cane and produced sugar, but their methods were most crude. To-day we produce more of one acre than was formerly grown on six. In earlier days the sugar was boiled in kettles. There was a loss in sugar averaging about 40 per cent., and two tons of sugar an acre was considered a good yield. Now on our plantation our yield of sugar averages 14.9 tons per acre. No fertilizer was used in those earlier days. Now most liberal applications of commercial fertilizers form the very basis of our prosperity, and we are learning year by year that it pays to apply even more fertilizer. The fertilizer we use costs about \$40 a ton. How profitable it is when applied on our soil you may learn when I tell you that one half ton produced an extra yield in sugar worth \$80. On a plantation of 9,000 acres we apply annually \$200,000 worth of commercial fertilizer.

ACCURATE AND COMPLETE ACCOUNTING

"Of course in connection with our farming the most accurate account is kept of everything about the plantation. There is no growing crops that do not pay. We keep accounts to make sure they do pay, and we are constantly endeavoring to make them better. Everything is run on the strictest business principles. For a general manager we hire the most competent man available.

He is an agricultural chemist, a civil engineer, and a general all-round man of many years' experience. We pay him a salary of \$10,000 yearly, and provide him with a home and servants. Other men, heads of various departments under the general manager, receive good salaries. For instance, we pay our agricultural chemist \$3,000; our sugar boiler \$3,000; our civil engineer \$3,000, and our head overseer \$3,000; in addition these men all have free houses and other concessions that go with them. The mill on our plantation cost \$1,000,000, and we have an average annual output of 35,000 tons of sugar.

AGRICULTURE IN THE PHILIPPINES

"Before the white man took charge and began running the sugar plantations according to the most up-to-date methods, two tons of sugar per acre was considered a good crop. Last year I had occasion to visit the Philippine Islands, and I found that under the management there a yield of two tons per acre and less was the common run. In the Philippines their methods of culture and boiling the sugar are very much the same as they were in Hawaii 50 years ago. They are recovering about 55 per cent. of their sugar, and that is of a very low grade and not marketable as commercial sugar. While there I induced 17 large growers to agree to grow the cane for a mill which we would establish, and we would give them 60 per cent., and do all the work; they now get less than 55 per cent., and have all of the expense and work. These planters in the Philippines have used no fertilizers for 30 years, and there is great possibilities in improvement in the crop production as well as in their methods of finishing the product."

"This is all very interesting," we said to Mr. Boswell, "but of course our farmers do not grow sugar cane and it is the belief of our economists that we are much better off with a large number of smaller farms owned and worked by individual farmers." "Quite true," said Mr. Boswell, "but you can grow sugar beets, and I am informed that when they are grown for your sugar factories they give an average test close up to 16 per cent. Such a crop ought to prove most profitable, and if the business were conducted under a competent head there is no reason why it should not flourish exceedingly.

WAGES OF CANADIAN FARMERS

"Many of the crops your Canadian farmers are growing are not paying them like as would other crops they might adopt. When I was home on the farm 25 years ago, we used to figure up what we made in wages over and above a fair return on our investment, and I think it was something like 12½ cents a day we got for our hard work. How much more do your farmers make to-day after paying good interest on their investments?"

"I am surprised to note that your farmers seem to be afraid to hire men. We believe in capitalizing labor, and of course growing the best money crops available and managing everything in the most economical way, such as is possible on large farms or plantations, under one capable management.

"Your Canadian farmers also do not appreciate the value of fertilizers. Very little commercial fertilizer is used at all in Canada, and I doubt

(Continued on page 6)

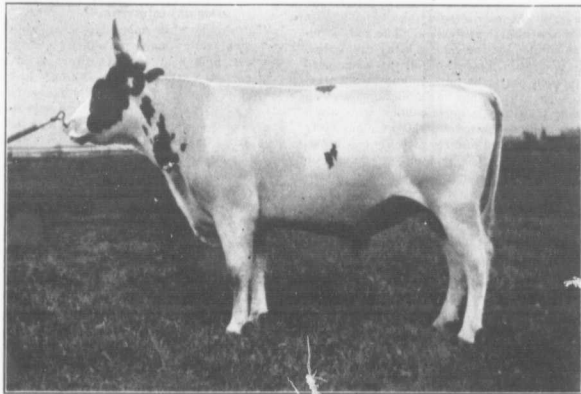
Expert Counsel About Buying Horses

If you are not conversant with the anatomy of a horse you had better not try to buy a horse on your own judgment unless you are purchasing from a responsible horse or a well-known dealer who has a reputation to uphold. But if you are an enthusiastic buyer on your own account, perhaps the writer can give you some hints that will be useful, and it may be, save you loss.

After you select the horse which you think has captured your fancy it might be best to have him brought out for a careful examination. Be sure that he is cool and not in a heated condition; remember that horses are subject to every ailment and disease that human flesh is heir to; that he has temperament, disposition, individuality and needs to be very carefully bought.

The first thing you look at is his foot—no foot, or horse; it should be on the concave order, a deep sole and not too narrow; this denotes breeding. Run your hand down his forelegs, examine for splints; if on the lone they will never hurt him; but if on the tendons drop him like a hot potato, no matter how small the splint.

To save the time and trouble have him jogged



A Three-Year-Old Ayrshire that Sold for the Record Price, \$2,600.

September 1st, 1910, this illustration from a photo taken by an editor of Farm and Dairy was published in these columns over the caption, "An Exceptionally Strong Animal that gives Promise of a Great Future." This bull, Bargenock Victor Hugo (Imp.), one of the Robt. Hunter & Sons' herd, sold at their public auction dispersion sale two weeks ago, for \$2,600 to Mr. P. Ryan, of Brewster, N.Y.

quietly down on the floor, on stone or cement if possible, and look for lameness, and see if his style of going suits you. Now examine his coronecs for sidebones; take a look at his eyes, and that very closely. Stand in front of him to see that he has a full chest; glance between his forelegs at his spavin joints; run your hand over his kidneys and press hard as you do so; pass behind him and see that he stands square; examine for curbs (a curb will never hurt a horse after he is six years old); feel his hocks for incipient spavins or bruises on the cap of his hocks, which require a satisfactory explanation from the owner. Don't forget to look for thoroughpins and bog spavins; look carefully at his hips that they are both alike; personally I would never buy an interfering horse, or a horse that shows symptoms of it.

See that your intended purchase is well ribbed up; long backed, narrow-gutted horses are bad feeders and doers and cannot stand their work. See also that he has plenty of neck, good, high shoulders and sloping back. Then proceeding, ask the holder of the horse to walk quick into his flank both ways, turning him quickly; then back him while you look carefully for symptoms of springhalt or cramps.

If up to this time the horse has borne inspection favorably put a man on his back and gallop him as fast as he will go to test his wind for a whistling sound. If all right have him put in harness to see if he has any vice. Stable habits, such as weaving, wind sucking, cribbing and halter pulling, must be left to the voracity of the seller's word, as they are only to be detected when the horse is standing quietly in the stable.

In the matter of age four years old is not preferable. You are taking chances with the young horse. I had rather buy a horse at eight than five, as he is then in his prime, and his habits are all developed; if a horse has arrived at that age and maintained his soundness, you can rely upon his being a good one. If he fills the bill, buy him; good horses are scarce.—"Dick."

Harvesting Alfalfa Without Hand Work

"Most of our neighbors think that we put too much work on our alfalfa when cutting it for hay," said Mr. H. Glendinning, of Ontario Co., Ont., recently when in conversation with an editor of Farm and Dairy. "We do put a lot of work on our alfalfa, but very little of it is hand work.

"We have now used the same method of curing alfalfa for three years and have not heard of a better one. We start two mowers in the morning as soon as the dew is off, and cut until two or three in the afternoon. The tedder is started soon after the mowers. We go over the field with the tedder in the afternoon. The alfalfa is raked into windrows that night with a side delivery rake. The following morning the tedder is run lengthwise of the windrows and again in the afternoon. It is left in this condition the second night, tugged the next morning, and then hauled into the barn. As we use a hay loader, the only hand work is on the load and a little in the mow.

"It is a general opinion that as much tugging as I give my alfalfa is not advisable in that the leaves will be knocked off. I do not find that the leaves are knocked off. Tedding merely gives the leaf an opportunity to perform its normal function. The function of the leaf in curing hay of any kind is to carry off the water. If the alfalfa is left in the windrow, as is so commonly advocated, the leaves are exposed to the rays of the sun for a long time and are killed. The water then has to come out of the stalks by some unnatural method, and a poor hay results.

By constant tugging the leaves are not exposed to the direct rays of the sun for any length of time, and the alfalfa cures more quickly and more naturally. I used to avoid tugging whenever possible, until one day it struck me that I was not giving the leaf an opportunity to perform its natural function. I changed my methods entirely, but my new method was so out of the ordinary that it was several years before I advocated it in public."

Profitable Lessons From Cow Testing

W. H. McGregor, Prince Co., P. E. I.

Mr. Mitchell of the Dairy Department lectured on dairying here in July, 1909, and induced us to organize a cow testing association. It was August before we got our equipment. My best cow gave in that month 780 lbs. of milk; the poorest 140 lbs. The same cows in August, 1910, gave 510 and 820 lbs. of milk respectively, having been better cared for during the previous winter and plenty of peas and oats provided for summer feed.

Since we started weighing and testing the milk from individual cows we do not let anything prevent us from getting the feed in for the cows each night and morning, thus keeping them from shrinking, which they will do very quickly when the grass gets dry and the flies bad, although the shrinkage may not be noticed where the scales are not used.

One thing I have learned since starting a test is that the most profitable time to have the cows freshen is in the fall or early winter. I had heard this fact stated time and again, but it never appealed to me until last winter, when I found out by experience. I had a heifer that lost her calf by some accident two months before it was due. She came to her milk and in 12 months she gave 5,380 lbs. of milk, was dry six weeks and freshened again. This I know is not a large yield by any means, but is 2,000 lbs. above the average for the province and is 2,000 lbs. or more better than she would have done freshening in May.

Another cow that freshened four months before we began to test gave in 14 months without freshening 8,000 lbs. of milk. This cow, barring accident, will give about that amount in the next 11 months if she keeps along as well as she is doing at the present time. Were I not weighing the milk I am sure she would not give more than two-thirds of this amount, as she would not be fed as well as we are feeding now when we know what we are getting for it.

We bought a cow some time ago without testing her milk. When she freshened in 1909 she gave a very small amount at each milking. I made up my mind right away that she would go off in the fall, or before, if possible. When we began to test, the manager of the factory asked me over the phone how much I would take for No. 1 cow. I replied that I was looking for something I had a grudge against and that that could have her pretty cheap. "Well," he replied, "her milk tests 5.0 per cent." At the end of the year she was only 20 lbs. of fat behind the best cow, her milk going up to 6.0 per cent fat. Needless to say I have not given her to the other fellow yet.

We have increased the milk yield several hundred pounds per cow since testing systematically and we have also got a great desire for better and more productive cows; This desire may be in the mind of every dairyman; they will tell you so at all events. But they are not working for improved stock, for when they are requested by a representative of the Dairy Department to keep a record of the production of their cows they will have some excuse, such as lack of time, and that they know their best cows well enough. The time taken does not amount to much. When the help get used to weighing the milk they rather like it.

The serious flow through until next spring when milk gets hot from two years ago covers) as to dried up, however.

It seems a little extra at this absolutely net profit, keep them milk next winter will then give me the progress and Dairy paper perhaps more.

I count on a just such content is large enough. This I find to be wished by the peas (these are together with enough to cut cows milking. Later on, as so then I have lot upon which the

I have written who has not made his cows other ture. To these better use of coming out in and feed to the ter to feed it although if you and extra work just over the fence side of your patient, cut it haul it to the co

FREE If green feed tage of the hay be worth while to return fed, now meantime have of suitable fodder fed just now, as milk feeds. A calculating where larly will soon to may not use and Now that the again and are sure to take precautionary proprietary mixture Of these I would small quantity at is recommended. some of these, so have found out th

On dairy farms are the main source count they need as if anyone should

A Dairyman Writes about Summer Feed

T. R. James, Middlesex Co., Ont.

The serious problem of how to keep up the milk flow through the remainder of the season, and until next spring again, now confronts us farmers who milk cows. We may as well expect to get heat from burning coal ashes (as was tried two years ago after the report of a so-called discovery) as to expect a full milk flow from the dried up, hard pastures as are now available.

It seems a hard thing to have to feed our cows extra at this time of the year, but the practice is absolutely necessary if we would make the greatest profits, keep our cows in good condition and keep them milking so that we may have them milk next winter, when, as a matter of course, we will all feed the cows as well as we know how. I know of no greater folly than is the common practice not to feed cows extra at this season of the year, because we are too busy at other things. What is the use of working in the roots and corn, cutting the hay and storing it away that the cows may be fed well next winter unless we feed them now and keep them up to their full production? It will not be possible for the cows next winter to pay as they should for the feed we will then give them. Now is the time to feed, and the progressive dairymen who read this Farm and Dairy paper know as much about it as I do—perhaps more.

PROVISION FOR FEEDING.

I count on making provision every spring for just such contingencies as we now face. My silo is large enough that I have some silage left over. This I find to be great summer feed, and it is relished by the cows. Then I have some oats and peas (these are now just ready to be fed) and together with green alfalfa, or when it is not big enough to cut I have the hay, I can keep the cows milking fairly well in spite of the pastures. Later on, as soon as the corn comes into tassel, then I have lots of feed that the cows like and upon which they milk splendidly.

I have written this letter more for the man who has not made sufficient provision for feeding his cows other than what they can get in the pasture. To those men I would say you can make it better use of some of those oats that are now coming out in head than to cut some each day and feed to the cows, all they will eat. It is better to feed it in the mangers at milking time, although if you do not care to go to this trouble and extra work it will be worth while to feed it just over the fence, should the oat field be alongside of your pasture. Should it not be so convenient, cut it and throw it onto a wagon and haul it to the cows.

FEED HAY IF YOU MUST.

If green feed be not available then take advantage of the hay on hand. It probably would not be worth while to feed the cows new timothy, but mixed hay, or clover, would give much better returns fed now than later if the cows in the meantime have been made to suffer want of plenty of suitable fodder. Grain seems rather expensive to feed just now, as is the case with bran and other mill feeds. A little experimental work and calculating where the milk is being weighed regularly will soon tell how much of these we may or may not use and return a profit.

Now that the flies have become so numerous again and are such a pest to the cattle, it pays to take precaution to keep them off. Several proprietary mixtures are to be had at local stores. Of these I would advise anyone to get only a small quantity at the start and of a brand that is recommended. There is danger in applying some of these, so be careful with them until you have found out the effects of the application.

On dairy farms—real dairy farms—the cows are the main source of income, and on that account they need to be well cared for. It seems as if anyone should know this, in their own best

interests, but how frequently we see dairymen blind to their own best interests and allowing their cows—their main source of income—to suffer! Is it because they think the cows, somehow, will make them profits, or is it because they have never been used to feeding and as yet cannot bring themselves to see the necessity of extra feed and the great profit that comes from it, or, failing profits directly, then the great loss indirectly through having not provided for the cows all they require?

Seasonable Notes about Alfalfa

Notwithstanding severe winter-killing and the dry, hot summer, alfalfa has again this season given a good account of itself, and has again demonstrated that it is the peer amongst hay crops. The first cutting was well ready to harvest by the week of June 12th. In most cases reports to hand state that it was cut in that week and the week following. The yield has been most satisfactory, averaging about two tons to the acre. The alfalfa has since come on in splendid shape in spite of the dry weather and is fast making headway towards a second crop. In a year like this one, with ordinary red clover so scarce—it having in many sections been almost totally winter-killed, alfalfa hay will be, even more than usual, appreciated by those who have it.

ALFALFA FOR SEED

Some farmers are counting on reserving their second cutting of alfalfa for the purpose of obtaining seed. While it is sometimes very profitable as a seed crop, we all should remember that ordinarily alfalfa in Ontario does not produce over two bushels of seed to the acre, and in reserving a piece for seed one loses what he might otherwise obtain from the second and third cuttings, and while he may obtain two bushels of seed or more per acre he is just as liable to fail entirely to obtain seed. On this account one is usually ill-advised in trying for seed, and this year particularly when fodders, clover especially, is likely to be at a premium, it appears to be a wiser course not to save seed, but to take the second and third cuttings for hay.

Jottings from Farmers

I believe in cutting clover as rapidly as possible.
—C. S. Johnson, Huron Co., Ont.

Hay that is cut and then rained on is apt to become affected with mildew. Such hay should be thoroughly cured before being placed in the mow. It would need to be cured much dryer than hay made under ordinary conditions as I am satisfied that mildew and the mold that appears later in stored hay are one and the same.—Henry Glendinning, Victoria Co., Ont.

Farmers have to a great extent given up the summer fallow. They have found there is a great loss of natural food when they summer fallow as the heavy rains carry away with them the nitrogen, and it is lost. Another argument against summer fallow is that the ground will become devoid of humus. Keep the ground covered, and if you have a good summer crop it will conserve all the nitrogen.—W. C. McCalla, Lincoln Co., Ont.

Experience with Heavy Horses

Chas. Groat, Ontario Co., Ont.

Heavy horses have paid me very well in the past. I have sold a yearling filly for \$250 and a two-year-old, weighing 1,930 lbs., for \$550, and a number of others at good prices. The last two years we have been rather unfortunate taking them to the winter fairs. We captured good prizes, but the colts caught colds, and we lost them.

I have three mares in foal this year, two imported ones and a good Canadian mare. I only have a small farm and work the mares.

Most of our neighbors like the Clydesdale. It would be no use to introduce any other breed in our midst. Most of us try to raise two or three

**Heavy Hay Right on the Brow of a Hillside**

Alfalfa is wonderfully productive, even on clay hillsides, where with other crops we ordinarily would not expect so luxuriant a growth. This photo was taken on June 3rd by an editor of Farm and Dairy, and shows alfalfa, heavy even piece of alfalfa, although quite badly winter-killed in places, gave a cutting of Farms and Dairy this field had developed a splendid second growth in spite of the severe drought, which has burnt other hay plants and caused the ordinary pastures to turn brown and dry. Mr. H. R. Nixon may be seen in the illustration.

colts each year. Foals four or five months old sell from \$115 to \$200, and when old enough to break from \$200 to \$350. These high prices often tempt us to part with our best breeding stock. To improve our horses we should keep the best fillies, not sell them, even though tempted with a good price.

The foals are taught to lead while young. They are taken to the dam and let suck once in the forenoon and once in the afternoon. I would rather handle the foals in this way than let them run with the dam for two months or so and then wean them and put the mare to work, as is sometimes practised, and let the foal out on dry pasture to search for a living and fight the flies.

A little separated milk is a good thing for a foal. The last one I raised when 17 months old weighed 1,530 lbs. He got second in a large class at the Guelph winter fair last winter. There is something in separated milk that makes them grow and keeps them healthy.

A PLEA FOR THE LIGHT HORSE.

The light horse is all right in its place. I believe every farmer needs one. They are just the thing for fast driving. I like to have a horse fitted for this work, but I do not think everyone is fitted to handle light horses. It takes more time and patience to get them trained properly, and a colt must be well trained now—a days to be safe for driving around automobiles, street cars, and so forth.

Every farmer's wife and daughters should know how to drive. It is not only handy, but it is healthy for them to drive, and no one has a better right than a farmer and his family to have a good driving horse and carriage. But for a profitable horse to breed I prefer the draught type.

In my experience of 20 years I have on all reasonably dry soils found that alfalfa winters better than other clovers. I have sowed more than ever to alfalfa this spring.—John Clark, Grey Co., Ont.

Experiences in Cow Testing

W. H. Cherry, Haldimand Co., Ont. One does not need to drive far into the country even to-day to find that the good advice given by Farm and Dairy and other farm journals in regard to the care of cows is not heeded. In winter herds of shivering cows still huddle around the straw stacks while their owners stonily maintain that there is no money in dairying.

I was in the same position myself some few years ago, but decided to specialize a little and await results. I purchased a set of dairy scales and a four-hill Babcock tester. Their combined use was the means of finding the herd of nine out of 13 of the dairy cows. New ones were purchased, including some pure bred Holsteins. My dairy cows now average from 8,000 to 15,000 lbs. of milk per cow annually. Formerly from 3,500 to 4,000 lbs. of milk was the limit.

Three of the grades in my herd have for their dam the light-colored cow pictured in Farm and Dairy of Dec. 15th. The cow there illustrated gave her owner, Mr. Wm. Pearce, of Oxford Co., Ont., 11,366 lbs. of milk in eight months. He sold her for \$105. The heifers are no discredit to their dam.

A Combined Rake and Tedder

Prof. John Evans, Guelph, Ont. Simplicity is not always a characteristic of combination implements, but it is present to a marked degree in the new side-delivery rake and tedder, which does away with at least one implement in hay-making.

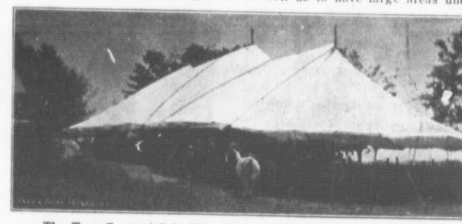
It may be explained that "when the rake drum revolves in one direction, the machine acts as a side-delivery rake; by moving a lever, thus reversing the direction in which the drum revolves, the machine is immediately transformed into a hay tedder."

When the machine is used as a side-delivery rake, the rake drum revolves

in the opposite direction to the road wheels. The rakes collect two swaths cut by an ordinary two horse mower and it is claimed will deliver the hay gently and neatly in one loose continuous windrow, in the best possible shape for "air curing." The motion of the teeth is "easy but positive," their action, we are assured, being very similar to the work of hand rakes.

When acting as a tedder the rake drum revolves in the same direction as the road wheels, but naturally, at a higher speed. In this way it shakes the hay gently but thoroughly, without any thrashing or injury, the hay lying in two swaths cut by an ordinary two-horse mower.

The rear castor wheels can be adjusted to carry the frame at varying heights to suit all conditions of soil and surface and crops, and coil steel springs are fitted on the stems of the castors to lessen jolting on uneven ground. The teeth are arranged in



The Tent Covered Sale Ring at the Recent Noted Ayrshire Sale

This illustration shows the tent under sale of Ayrshires was conducted.—Photo by an editor of Farm and Dairy.

three rows, with ample clearance between each, and the rake drum is provided with a number of curved rods to assist in cleaning the teeth as they rise from the ground.

Scientific Agriculture in Hawaii

(Continued from page 3)

If there is a farmer in Peterboro county who has ever spent anything worth while for fertilizer to apply on his land. Even the fertilizer you have in the country is not appreciated. I understand that large quantities of wood ashes annually are allowed to leave the farms, and they enter the channels of commerce, and are shipped to be used by the United States farmers.

Among other subjects touched upon by Mr. Boswell was that of our educational system. "Farming is like every other business," he said. "There is no end to what one can learn about

farming. Before your Canadian farmers will ever adopt the most up-to-date and scientific methods of crop production they will have received instruction on scientific agriculture in their schools. Before they can ever appreciate the great importance of commercial fertilizer and be able to profit from their use they will require a considerable knowledge of agricultural chemistry. This they have not to-day, nor will the rising generation get it from the young agricultural teachers who dispense the training in the public schools.

Did Canadian farmers adopt some of the methods that have brought us success in Hawaii, your agriculture would attain a new lease of life and become exceedingly profitable. Before returns you might it will require that more land be worked under one management. It may be worked cooperatively, if you wish, but it will not pay so well as to have large areas under

Our Veterinary Adviser

ABSCESS ON LEG.—"One of my horses has one of his hind legs swollen from the fetlock. In two or three days it has burst, and has since been running freely, was working the previous day, and the trouble is not increasing. The swelling is hard. Can you explain this?"—O. A., Hutton Co., Ont.

"This horse had his leg bruised some way and an abscess formed. Flush the cavity out with carbolic daily until healed with a five per cent solution of carbolic acid. When healed if the swelling does not subside, lance, rub and bandage when hot as in the stable. Give regular exercise or work, and give one dram iodide of potassium twice daily.

DIARRHOEA IN CALVES.—My calves are scouring very badly. Have tried cod liver oil, reducing the amount of milk fed, etc., without success. What treatment would you recommend?"—Peel Co., Ont.

"Add to the milk given one-fifth of its bulk of lime water. If the calves do not check the scouring, give one dram Lanolinum and one dram cod liver oil and prepared chalk in a little new milk every five hours until diarrhoea ceases, and continue the lime water."

A raised sleeping platform in the pigery makes the pigs cleaner and more comfortable.—W. J. Telford, Peterboro Co., Ont.

160 ACRES OF LAND FOR THE SETTLER

Large areas of rich agricultural lands, convenient to railways, are now available for settlement in Northern Ontario.

The soil is rich and productive and covered with valuable timber. For full information regarding homestead regulations, and special colonization rates to settlers, write

The Director of Colonization Department of Agriculture, TORONTO



SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS

Any person who is the sole head of a family, or any male over 18 years of age may homestead a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the District Office of Entry from which he desires an agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six months' residence upon said cultivation of the land in each of five years. A homesteader may live within one mile of his homestead on a farm of at least 30 acres, or on a quarter section held by him or by his father, mother, son or daughter, or on a quarter section in certain districts, a homesteader's quarter standing may pre-empt a quarter section of altered Dominion land. Price per acre. Duties—Must reside upon the homestead of pre-emption six months or six years from date of homestead right, including the time required to earn homestead interest on a quarter section extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead of altered Dominion land at \$10 per acre. Duties—Must reside six months or three years, cultivate 50 acres and erect a house.

W. W. O'BYE, Minister of Agriculture, Ottawa, Ont. N.B.—Unauthorized publication of this advertisement will not be paid for.

Harvesting

We cut on July. When can be stripped and the thinn cuttings. We take to the bottom, we shells. The leaves to dry as the seeds. We haul the with cotton. done the next possible.

In case it rained we do hasten drying crop. A bush would be handling. It is very gentle.

Secret of

Underdraining the problem of and securing it. The point is following letter. Dairy last week, Merrillville of the Brockville, Ontario.

"A few days of Col. Stafford's of Len. Ont., a much interested all went. They pulled by the in length.

Mr. Stafford of the county sent farmers in been a strong average. These six are well sown and harrowed and manured and sown. September. Mr. Stafford's indication that average yield of but best of all of grass were complete. To the striking example of summer fallow tiration.

This season the following is supplied that is completely eradicated other noxious we this case. Even Stafford writes information to a of cultivation a staff—What has sufficed on this ining mustard, etc. production of the many farmers it following his method will repair for me.

Management

Information for the alfalfa feed agronomist at the most Station in dened form. When weather unfavorable the when this occurs land the following the case may be successful trial if. If the leaves badly, or if severely, or if weeds the young plants. Clip whenever

The Gate That Lasts
The frame of the Peerless Gate is made of steel tubing, scientifically welded into one solid piece. It is strong and rigid, and will not get out of order.

Peerless Farm and Ornamental Gates

are built to stand. They will save you money because they never need repair. We also make lawn, farm and poultry fence that stands the test of time. Write for full particulars.

THE BARWELL HOXIE WIRE FENCE CO., Ltd.,
Dorset, Weymouth, Dorset, England, Ont.

WESTERN LAND FOR SALE

In areas to suit purchasers, from 160 acres upward, situated on or near railways in the Best Wheat, Oat and Stock Growing Districts of

SASKATCHEWAN AND ALBERTA

250,000 Acres to choose from

Prices low. Terms generous and helpful. Special inducements given actual settlers, and those requiring blocks for colonization purposes.

Write for particulars. Reliable agents wanted in every county.

F. W. HODSON, & CO., TORONTO, ONT.

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Branch Office:—North Battleford, Sask.

During 1910 we sold over 133,400 acres; during the past four years we sold over 400,000.

Cow Improvement on a Big Sale

S. A. Freeman, Oxford Co., Ont.

Last year our herd of 70 cows gave us 526,042 lbs. of milk, an average of 7,515 lbs. We received for this milk \$65,510.61, an average of \$93 a cow. Twelve of the best cows had an average production of 10,426 lbs. of milk. The herd is composed of grades of all sorts.

In 1906 the average production of our herd was 5,149 lbs. of milk. They have made a gain, therefore, of 2,366 lbs. each. They have always received much the same care and feeding. This additional flow at the average price that we receive for milk this year, \$1.23 1/4 a cwt., means an added revenue of \$2,257. I attribute this gain almost entirely to weighing the milk from individual cows and keeping records. The poor cows have got to travel. I set my standard this year at 7,000 lbs. each, and sold the nine that did not measure up to this standard. I have 12 two-year-old heifers to replace them. I am not satisfied with my herd yet, however, and intend to keep on testing and weeding out the poor ones until the cows have an average production of 10,000 lbs. In feeding silage is our standby. We grow 50 acres of corn each year. Last year we bought in addition to what we grew on the farm \$600.26 worth of mill feed, mostly bran.

FARM MANAGEMENT

Harvesting the Aiskie Crop

By Glendinning, Ontario Co., Ont.
 We cut our aiskie the first half of July. When one-third of the heads can be stripped off between the finger and the thumb is the best stage for cutting. We use a clover table attached to the cutting bar with a false bottom, which saves the seed that shells. The bundles of aiskie are allowed to dry well, but are not stirred, and the seeds are cleaned in a machine. In hauling the wagon rack is covered with cotton. Threshing should be done the next day after hauling if possible.
 In case it rains on the aiskie in the field we do not throw it about to hasten drying, as we would a foreign crop. A bushel of seed to the acre would be lost with a little rough handling. It may be turned over, but very gently.

Secret of Good Crops—Few Weeds

Underdraining offers a solution to the problem of keeping down weeds and securing heavy yields from crops. The point is well illustrated in the following letter received by Farm and Dairy last week from Mr. N. G. Summerville, of the D. H. Burrell & Co., Brockville, Ont.:

"A few days ago I visited at Lieutenant Stafford's farm in the vicinity of Lyn, Ont., and while there was very much interested in a six acre field of all wheat. Two stalks of this wheat pulled by the writer measured 5 ft. in length.

Mr. Stafford, who is an ex-warden of the county and one of the prominent farmers in his section, has always been a strong advocate of underdraining. These six acres are tile-drained, were well summer-fallowed last season, plowed four times, and riddled and harrowed as often as was necessary, manured with 12 loads to the acre, and sowed on the first day of September. At the time the writer visited Mr. Stafford's there was every indication that he would have an average yield of 50 bushels an acre, but best of all the mustard and scutch grass were completely killed.

The writer's mind was given this very striking example of killing bad weeds by summer fallowing and proper cultivation.

This season Mr. Stafford is summer-fallowing 10 acres, and he is satisfied that by so doing he can completely eradicate the mustard and other noxious weeds. The example in this case is very striking, and Mr. Stafford would be willing to furnish information to any one of his method of cultivation and underdraining.

"What has been done by Mr. Stafford on this six acre field in killing mustard, etc., and increasing the production of the soil can be done by many farmers in his section and by following his methods they would be well repaid for their labors."

Management of the Alfalfa Field

Information for the management of the alfalfa field after it has been seeded is given by O. O. Chubb, agricultural agent at the Oklahoma Experiment Station in the following condensed form:

When weather conditions are very unfavorable the young plants may die. When this occurs reseed on the same land the following spring or fall, as the case may be. Do not let one unsuccessful trial discourage you.

If the leaves turn yellow or rust badly, or if severely attacked by insects, or if weeds grow rank and shade the young plants, it should be clipped. Clip whenever the plants begin to

blossom even during the first year.

Use a spring-tooth harrow, a renovator or a disc harrow in the spring just before a growth starts or just after a crop is removed when the soil becomes hard and compact or very weedy. When a disc is used set it nearly straight and weight down so that it will run the desired depth.

Manure will always give good returns and especially on poor land and when the plants are doing poorly.

Do not pasture late in the fall or during the winter. Most alfalfa growers claim better results when the crop is grown for hay than when the field is pastured.

Do not pasture at all during the



The Way Alfalfa Grows in Peterboro Co.

The alfalfa here illustrated is on the farm of W. G. Sanderson, Peterboro Co., Ont. The photo was taken on May 24th, and was then almost ready for its first cutting. This is a crop of the value of which Peterboro county farmers are just beginning to appreciate.—Photo by an editor of Farm and Dairy.

first three years, or until the alfalfa becomes thoroughly established.

The alfalfa crop should be cut whenever five or 10 per cent. of the plants are in blossom. A better method of telling when to mow is to watch the base of the plant and cut whenever the little buds show that a new growth is started.

Allow the plants to wilt but not to become too dry in the swath, then rake and cure in the window or in bales.

Stack or put in the barn when cured, which will be about one week

after mowing, depending upon the weather conditions.

When a seed crop is desired, the first crop should be removed and then the plants allowed to go to seed. The production of seed depends very largely upon the weather conditions and upon the thickness of the plants. The seed crop may be mowed and raked the same as the hay crop, and most of the seed can be saved by an ordinary threshing machine.

Feed this valuable hay to good stock; you cannot afford to sell it.

Ventilation of a Cow Stable

Editor, Farm and Dairy.—I think that it was in Farm and Dairy that I read recently about giving ventilation through the fodder stored above the cattle over an open ceiling. I consider this a great mistake. It will destroy the quality of the fodder. The ceiling in my stable is double boarded with heavy tar paper between.

I have just built a new cow stable 40 by 40 feet, with nine and a half feet between the cement floor and the ceilings. I put in a number of windows 3 1/2 by 6 feet, opening from the top for ventilation in warm spring days. Besides ventilation through the hay chute, 4 1/2 by 4 1/2 feet, and other ventilators.—W. A. Oswald, Bromo Co., Que.

Harrowing vs. Prayers for Rain

"If I were to come onto your farm and set 750 teams to work for a week hauling water to a quarter section at the rate of four tons a day, I would then only put on as much water as evaporates in a week when there is a good moisture content in the soil." Such is the very striking illustration used by President Worst of the North Dakota agricultural college of the great amount of water lost by evaporation.

A thorough harrowing will stop this evaporation and save the moisture for the crop.

A cow must produce about 4,000 lbs. of milk and 160 lbs. of butter fat to pay for her feed and labor; this is the dead line. 5,000 lbs. of milk, \$10 profit; 8,000 lbs. of milk, \$40 profit—four times as much. Ten cows averaging 8,000 lbs. of milk are as profitable as 40 cows producing 5,000 lbs. The cost of keep increases but \$35 a cow, from 2,000 to 10,000 lbs. of milk given, yet the income increases \$115, over three times as rapidly.—Prof. W. J. Fraser, University of Illinois.

TWO in ONE

is what you have in the
Stratford Rope Extension LADDER

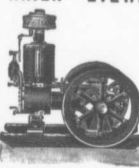


The rope is so arranged that by unsnapping it from the top section the ladder can be separated to form two single ladders.

The hooks automatically lock at every round and unlock between the rounds. These ladders are strong, light, easily operated, durable, and convenient,—a necessity around the house and farm buildings. Write us to-day for Catalogue H for full description and price.

THE STRATFORD MFG. CO. LIMITED
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Will pump water for you and put it just where you want it. It is the simplest engine on the market. It starts easily and never balks. Our booklet No. 57 gives you a complete course in gasoline engineering. Send a post card for it to-day. IT IS FREE.

The Ontario Wind Engine and Pump Company, Ltd., WINNIPEG TORONTO CALGARY



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 —The Philosopher of Metal Town.

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is superior in every way. It is most economical—is easy and quick to lay or erect, saving expensive labor, and lasts a lifetime without continual repairs. Lightning, rain, wind or snow has no effect on "Metallic"—it is WEATHER, FIRE AND RUSTPROOF, the best material for all buildings.

Look over this list—all made from the finest quality sheet steel

- "EASTLAKE" METALLIC SHINGLES. On buildings for 25 years, and still in perfect condition.
- "METALLIC" CEILINGS AND WALLS. A handsome, sanitary decoration—lasts a lifetime.
- "METALLIC" ROCK FACED SIDING. In brick or stone design for house.

- "MANITOBA" STEEL SIDING. The best for large buildings, elevators, mills, storerooms, etc.
- CORRUGATED IRON—GALVANIZED OR PAINTED. For implement sheds or barns, fireproof and durable.

You should read our interesting booklet "EASTLAKE METALLIC SHINGLES" and our new Catalogue No. 70.

A post card with your name and address will bring them to you at once.

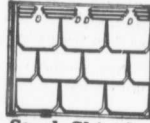
Agents wanted in some Sections. Write for Particulars.

MANUFACTURERS

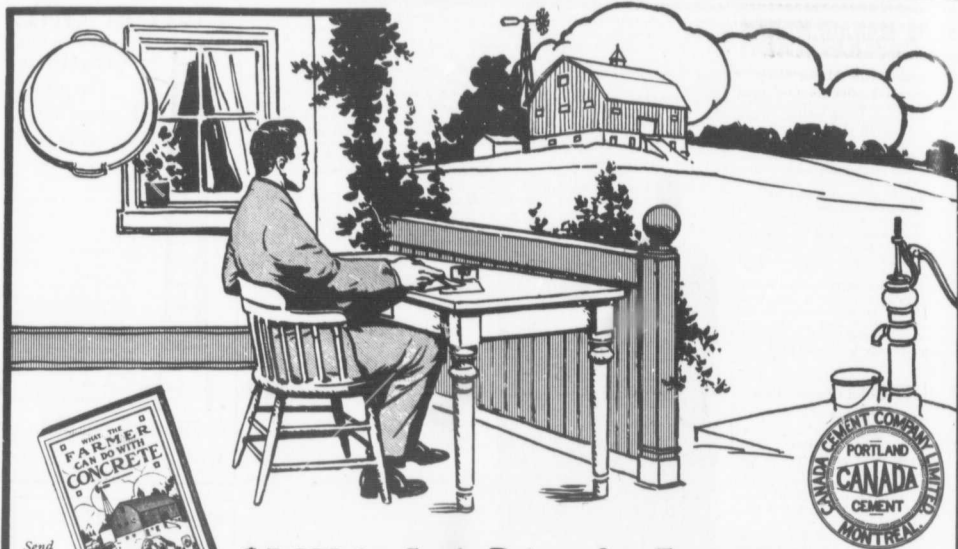


TORONTO WINNIPEG

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\$3,600 in Cash Prizes for Farmers

Tell Us How You Did It

You may win a prize by doing so

SUPPOSE your friend Bob Wilson, on the next concession, "pulled up" at your front gate on the way back from market and asked you about that silo or barn foundation you built, you would be glad to tell him, wouldn't you? And it wouldn't take you long either, would it? And, as a matter of fact, you'd find as much pleasure telling him as he would in listening—isn't that right?

First, you would take him over to view the silo or barn foundation. Then you would start to describe it—its dimensions—the kind of aggregate used—the proportions of cement used—number of men employed—number of hours' working time required—method of mixing—kind of forms used—method of reinforcing, if any—and finally, what the job cost. So that by the time you finished, neighbor Wilson would have a pretty accurate idea of how to go about building the particular piece of work which you described.

Now, couldn't you do the same for us, with this difference—that you stand a good chance of getting well paid for your time?

In Prize "D" of our contest, open to the farmers of Canada, we offer \$100.00 to the farmer in each province who will furnish us with the best and most complete description of how any particular piece of concrete work shown by photograph sent in was done. The size of the work described makes no difference. The only important thing to remember is that the work must be done in 1911, and "CANADA" Cement used.

In writing your description, don't be too particular about grammar or spelling or punctuation. Leave that to literary folk. Tell it to us as you would tell it to your neighbor. What we want are the facts, plainly and clearly told!

Sounds simple, doesn't it? And it is simple. And surely it will well worth your while when you think of the reward in view.

Now, sit right down, take your pen or pencil—fill out the attached coupon—or a post card if it's handier—and write for the circular which fully describes the conditions of this, the first contest of the kind ever held in Canada.

Every dealer who handles "CANADA" Cement will also be given a supply of these circulars—and you can get one from the dealer in your town, if that seems more convenient than writing for it.

Contest will close on November 16th, 1911—all photos and descriptions must be sent in by that date, to be eligible for one of these prizes. Awards will be made as soon as possible thereafter. The decisions will be made by a disinterested committee, the following gentlemen having consented to act for us, as the jury of award: Prof. Peter Gillespie, Lecturer in Theory of Construction, University of Toronto; Prof. W. H. Day, Professor of Physics, Ontario Agricultural College, Guelph; and Ivan S. Macdonald, Editor of "Construction."

Having decided to compete for one of the prizes, your first step should be to get all the information you can on the subject of Concrete Construction on the Farm. Fortunately, most of the pointers that anyone can possibly need, are contained in our wonderfully complete book, entitled "What the Farmer Can Do with Concrete." A large number of Canadian farmers have already sent for and obtained copies of this free book. Have you got your copy yet? If not you'd better send for it to-day. Whether you are a contestant for one of our prizes or not, you really ought to have this book in your library. For it contains a vast amount of information and hints that are invaluable to the farmer.

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HORTICULTURE

Orchard Cultivation—Cover Crops

W. T. Macoun, Dominion Horticulturist, Ottawa

We must regulate our methods of orchard cultivation according to the differences in soil and climatic conditions with which we have to contend. Too much general advice as to the mode of procedure in orchard cultivation has been given. And the most of us are all too liable to follow this advice.

No matter what kind of a soil we have, however, we can lay it down as a rule that we should start to cultivate early. When to stop cultivation and put in the cover crop depends on the condition of the subsoil. If the subsoil is too moist there is more danger from too much cultivation than from too little. In this case put down a cover crop just as soon as you can. A sandy soil with a sandy subsoil requires a different treatment than a sandy soil with a moist subsoil. The first should be cultivated later in the season than the second. Every orchard man, however, should watch his trees and decide for himself what treatment the orchard requires.

COVER CROPS

With most soils a leguminous cover crop in the orchard is desirable, but if the soil is very rich, leguminous crops may be injurious in that they will cause excessive wood growth and deter ripening. Clovers and vetches are the cover crops in universal use.

At the Central Experimental Farm we have had good results from summer tares, sown at the rate of 40 lbs. to the acre. The advantage of tares is that they will grow until the land is frozen in the fall. Most cover crops, if they do not get a good start owing to dry weather, are killed by the first frost and the ground has no adequate covering. Tares, even without a good start, will make a good growth in the fall after other crops have been killed.

Lately, also, we have been using rye to mature the wood as in our cold climate proper ripening is very important. It is sown at the rate of five pounds to the acre, and plowed under in the spring.

Thinning Fruit

The careful orchardist should now be prepared to conduct systematic and rapid thinning of his tree fruit. Most trees set more fruit than they can bring to maturity without interfering with their production in the future. While thinning seems to be a large task and also expensive, it is greatly to be recommended if best results are expected. Do not delay

WHERE WILL YOU GO THIS SUMMER?

If you desire rest and recreation, why not "THE RIVER ST. LAWRENCE TRIP?"

Folders descriptive of the Thousand Islands, Rapids, Montreal, Quebec, Murray Bay, Tadoussac, the Saguenay River, etc., on application to any Railway or Steamboat Ticket Agent.

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HARDWOOD ASHES—Best fertilizer in use—George Stevens, Peterboro, Ont.

thinning until the fruit is too large. Start to thin when the fruit is about the size of a hazelnut or as soon as the grower can determine which is the best on the spur and after the early drops are over. One fruit to a spur is sufficient. See that the fruit is not allowed to remain on spurs closer than the spread of the hand. This, however, cannot serve as an accurate guide on all classes, for some trees are able to bring to maturity more fruit than others.

A knowledge of the yield in past years is quite essential to aid in judicious thinning. If the fruit is carefully thinned each year and the trees allowed only to mature that which will not overtax its constitution, it should bear a crop of normal fruit annually, other factors being favorable.

Some growers prefer to use small scissors or other specially devised instruments, while some prefer to pull out the undesirable specimens with the fingers.—H. Wicks, Idaho Experiment Station.

POULTRY YARD

White Diarrhoea in Chicks

The losses from white diarrhoea of chickens in Canada each year amounts to millions of dollars. Heretofore, little has been known even of the nature of the disease, and poultrymen have been in the dark in fighting it. Investigations at the Storrs Agricultural Experiment Station, Connecticut, by L. R. Pettger and F. H. Stoneburn, indicate that the disease is due to the specific organism, *Bacterium pullorum*. Some of their conclusions as to the spread of the disease are as follows:

1. The original source of infection is the ovary of the mother hen.
2. Eggs from infected hens contain the organism in the yolks.
3. Chicks produced from infected eggs have the disease when hatched.
4. The disease may be spread through the medium of infected food and water. Hence normal chicks may acquire it by picking up infected droppings or food contaminated therewith.
5. Infection from chick to chick cannot, apparently, take place after they are three or four days of age.
6. As a rule, infected chicks make less satisfactory growth than those that are apparently normal. For some time they appear stunted and weak, but may eventually undergo more or less complete development.
7. The female chicks which survive often harbor the infection and may become bacillus carriers. Infection in the breeding pens is perpetuated in this manner.
8. In all probability infection does not pass from adult to adult.
9. Infected hens are apparently poor layers, especially in their second and subsequent laying seasons.

July Poultry Pointers

Do not let up in your warfare against the destructive louse army. Lice are working havoc, and too severe measures can not be adopted to destroy them.

Fifth is just the right condition for their thrift. Lice and disease go hand in hand in ill-kept chicken coops. Clean up the droppings daily; disinfect the premises every week, and in this way the enemy will be subdued, if not extinguished.

The growing cockerels should now be separated from the pullets, and the former given an extra allowance of feed. They will need this additional amount more than will the pullets in order that they can be kept growing.

All the old stock that is not wanted should now be disposed of before they go into moult.

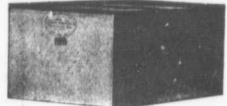
To Get Hens to Lay in Winter

Prof. J. Dryden, Corvallis, Ore.

To make the hen lay in winter is the real problem of success with poultry; yet its solution depends upon the solution of other problems. It is not merely a question of caring for or making the hens lay. The problem goes back to the making of the hen. If the hen were made right there would be little trouble in making her lay. How to make the hen lay in winter resolves itself largely into a question of making the hen.

I am inclined to think that those who say that the raising of the chick is the hardest problem come near "hitting the nail on the head." To get a profitable egg yield under any conditions, the flock of layers must be frequently renewed. The old hen doesn't pay. For commercial purposes it seldom pays to keep her more than two years. This means that in a few years the farmer has raised several generations of fowls, and any mistake in the breeding or raising is very soon evident. To be successful a poultry raiser must be able to maintain offspring with the same vigor and vitality as the parent; otherwise, there would soon be no eggs in winter because of lack of constitutional vigor in the stock.

But it is not all in the raising.



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Made of heavy galvanized steel, our Troughs and Tanks are strong, compact and durable. So successfully have they stood the test during the past five years that we are willing to ship any size you select to your station on the understanding that you can ship them back at our expense if not first-class in every detail. Write for catalogue D. We will build any size or style to order. Ask for quotations. Agents wanted.

STEEL TANK CO., TWEED, ONTARIO

There is probably more in the breeding; and it is not so much a matter of the breeds. No matter how they may be raised, fed and cared for, some hens won't lay, because they have not the breeding or the laying capacity. On the other hand, some will lay, almost in spite of neglect; that is a question of breeding.

SOME HISTORY about Typewriters



Modern and Ancient

CHAPTER NINE

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FARM AND DAIRY

AND RURAL HOME

Published by The Rural Publishing Company, Limited.

1. FARM AND DAIRY is published every Thursday. It is the official organ of the British Columbia, Manitoba, Eastern and Western Ontario Agricultural Districts, Quebec, Dairyman's Associations, and of the Canadian Holstein, Ayrshire, and Jersey Cattle Breeder's Associations.

2. SUBSCRIPTION PRICE, \$1.00 a year, strictly in advance. For British Columbia, \$1.20 a year. For all countries, \$1.50 a year. For Great Britain, add 50c for postage. A year's subscription free for a club of two new subscribers.

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

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

5. ADVERTISING RATES quoted on application. Copy received on the Friday preceding the following week's issue.

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

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The paid subscriptions to Farm and Dairy exceed \$986. The actual circulation of each issue, postage stamps included, is 10,000. The number of copies of the paper sent subscribers who are but slightly in arrears, and sample copies, varies from 500 to 1,000. The number of subscriptions accepted is less than the full subscription rate. The number of copies does not contain any dead circulation.

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

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We want the readers of Farm and Dairy to feel that they are safe with our advertisers who give us their assurance of our advertisers' reliability. We try to admit to our columns only the most reliable advertisers. Should any subscriber have cause to be dissatisfied with the results of the receipt from any of our advertisers, we will investigate the circumstances fully. Should we find reason to believe that any of our advertisers are unreliable, even in the slightest degree, we will immediately discontinue the publication of their advertisements. Should the circumstances warrant, we will expose them through the columns of the paper. This we will not only protect our readers, but our reputable advertisers as well. In order to be entitled to the benefits of our Protective Policy, you need only to include in all letters to advertisers the words, "I saw your advertisement in Farm and Dairy." Complaints must be made to Farm and Dairy within one week from the date of any unsatisfactory transaction, with proof thereof, and within one month from the date that the advertisement appears, in order to take advantage of the guarantee. We do not undertake to adjust trifling differences between readers and responsible advertisers.

FARM AND DAIRY

PETERBORO, ONT.

A GALA DAY FOR DAIRY CATTLE

Dairy cattle are coming well into their own. Recent auction sales have witnessed record prices being paid for dairy stock. Two weeks ago at the Robt. Hunter & Sons dispersion sale of Ayrshire cattle several new records were established.

High prices are being paid not alone for any particular breed of dairy cattle. At recent sales on the other side of the line, among which might be mentioned the Guernsey sale at Villa Nova, Pa., the prices paid for animals were record breakers. The same is true of the auction sale of Messrs. T. S. Cooper & Son, noted American breeders of Jersey cattle. Holsteins have sold well and for record prices; now the Hunter sale of Ayrshires, where an animal, as reported in Farm and Dairy last week, sold for \$2,600,

and 117 animals of all ages sold for \$30,215, or an average of over \$343.50 each, cannot help but renew courage in the hearts of dairy cattle breeders and cause an increased interest in dairy animals.

Great inspiration was afforded those breeders who attended the Hunter sale. Some present were heard to avow their intention of getting more strongly into the business and importing some of the best stock from Scotland. Far as the reports of this and similar events are read will the influence for better dairy stock be carried.

A gala day has dawned for dairying. Greater advance yet may be expected. The path has been blazed, the limit not yet reached, and there is every encouragement for those who admire and breed the good individuals of any of the leading dairy breeds. Let's all unite in a grand boost for dairying!

MUST FEED EXTRA TILL NEXT MAY

Again owing to unfavorable weather conditions, common, though differing in degree to every summer season, we dairymen if we would maintain the milk flow must resort to supplementary feeding. Happy are we if, in the light of former experience, we made provision last spring for suitable feeders and now have suitable pastures wherewith to supplement the pastures and maintain the money-bringing milk flow.

In some parts of Western Ontario, notably Brant county, the situation is unusually severe this season. Pastures have become hard and brown even where they are not short and the milk cows must be fed. Spring seeding of clover has been almost a total failure, and there is but very little old clover meadow to provide a second growth; hence no matter what the weather conditions may be from this time forward short pastures even in late summer and fall are bound to prevail. Mr. H. R. Nixon, a dairy farmer at St. George, told one of our editors who was at his place on Dominion Day that he would be obliged to feed his dairy cows from now on until late next May. He, like many other dairymen in this district, has provided for such a contingency, and now with ensilage, oats and peas, alfalfa and later on with green fodder corn, and again with ensilage, will be able to cope successfully with periods of drought, short pasture, and partially failing hay crops.

Good dairymen take no chances from this time forward with their cows not getting the feed they need to produce a profit. As pastures fail they know that it pays and pays well to provide other feed for the cows rather than to suffer them to slacken off in their flow, which, once it slackens, can hardly, if at all, ever be regained during that lactation period. Dairymen everywhere are well advised in falling in with the modern practice in this respect and attending to the wants and comforts of their cows, thereby giving them the opportunity to do what they surely will under these essential conditions—produce a steady and profitable income.

LAND-SEEKERS—TAKE HEED

As the harvest season again approaches people in the west are developing their characteristic uneasiness about garnering the crop. This year with the prospect of a bumper crop and little labor to handle it, unusual concern is being evinced in the labor problem and the call has been sent forth for laborers for the harvest fields. The harvest extensions will shortly be announced, and much of the good blood of Ontario and the eastern provinces will "trook" west, and take advantage of the call for harvesters as an opportunity of seeing the country.

Those who go west to help with the harvest and to see the country, possibly with a view ultimately of homesteading free land and settling in the western country, should not forget that in the great clay belt in Northern Ontario are opportunities surpassing those of the west for the homesteader. On this point Mr. Frank Moberly, C.E., of Barrie, who has recently returned from the west, where he has been this year to see how the homesteaders were getting on, states that he is more than ever convinced that the settler in the clay belt has in many things an equal chance with the prairie settler and in others a great advantage. In the matter of fuel and water, the Greater Ontario settler is away ahead. He has as good and a more lasting soil; his land is timbered, which gives him shelter and a marketable crop while clearing the land; he has a ready cash market at hand in supplying the railways, mining camps and lumber camps and he is 1,500 miles nearer the markets of the world, which gives a great advantage in freight rates. Railways now traverse the clay belt east and west, and north and south, besides which it is cut in all directions by great waterways.

The intending settler of small means may well look towards Greater Ontario with its many advantages over the west. He should think long and soberly, in the light of all the evidence, before risking his all on the uncertain homestead land of the prairies. Ye who are going west, take heed!

MAKE DITCHERS DUTY FREE

Traction ditchers are not made in Canada, yet they are dutiable at 17 1/2 per cent. This duty adds approximately \$250 to the cost of the ditcher to Canadians.

Protection of home industries and the collection of revenue are said to be the objects of our customs tariff. The tariff on ditchers does not come under either class. Since they are not made in Canada, there is no home industry to be protected. It can not be that the duty is maintained for revenue purposes because this added cost makes the number of ditching machines imported practically nil. The only reason apparent why a duty is imposed on ditchers at all is that it happens to come under a general classification in the tariff schedules that reads as follows: "Portable engines "with boilers in combination, horse "power and traction engines for

"farm purposes, 17-1/2 per cent." An exception should have been made from the general classification for traction ditchers.

Tile draining if installed where needed would result in an increase of millions of dollars to Canada. In Ontario alone there are over 5,000,000 acres of land in need of tile draining. Investigations carried on by the Ontario Agricultural College demonstrate that crops from tile drained land yield an average increase in annual value of \$23.65 over crops on similar land, not tile drained. Even were the average increase in value of the crops only \$10 an acre, a complete system of tile draining on the farms of Ontario would mean \$50,000,000 of annual added value; hence it is important that the drainage should be encouraged.

The future of tile draining depends largely on the traction ditcher. The scarcity and high price of labor renders manual labor too expensive for digging the ditches. We must have machine ditchers.

With the price of the ditching machine increased by \$200 or \$300 through the workings of a tariff, which does not protect home industry, and is so high that it shuts out the importation of the machine almost completely, progress in tile draining must perforce be very slow. The removal of the duty on ditching machines would be of great value to the farmers of Canada. An amendment to the tariff schedule already quoted should be made whereby traction ditchers could be imported free of duty.

If there is any secret about getting a good corn crop after it is once planted—a suitable variety having been sown on well prepared

A Corn and fertilized soil—it is **Crop Secret** that the corn be not too thick and that it receive frequent cultivation, thereby conserving the moisture necessary for the growth of the crop. The cultivator needs to be kept on the move from this time forward and each time it is sent through the corn rows stirring the surface soil and leaving a light earth mulch a considerable amount is being added to the ultimate yield, this increase being much in excess of what it costs to obtain.

Pork Packing Profits

(Hamilton Times.)

Mr. J. W. Flavell, Toronto, is one of the men who pretend to believe that Canadian industries stand to suffer from the effects of the reciprocity agreement. Mr. Flavell's particular care is the William Davies Pork Packing Company, and as that company is now issuing a million and quarter of bonds at 6 per cent., the company's official statement may help us to judge as to whether it is really suffering infamously.

It is stated that the net profits of the company have been \$268,000 per annum. The further information is afforded that for the past five years the earnings have averaged over 12 per cent. on the common stock of the company, and sufficient to pay the bond interest over three times and a half. The people of Canada will not shed many tears over the hard-bits of such "infants."

Creamer

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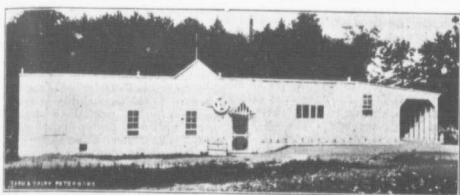
Creamery Department

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. Address letters to Creamery Department.

Variation in Cream Tests

I notice that Farm and Dairy has always advocated the payment for milk and cream on the butter test. I myself, heretofore, have always thought that this is the only fair way to divide the proceeds, but the test we have received lately has made me incredulous. Why is it that the test is not the same one week with another when the separator has not even moved and we have the same cows should not the test be practically the same. Many dairymen are very prejudiced in regard to the test and think it a humbug. The way our cream has tested for the last few weeks seems to confirm my incredulity. Should it vary?—N. D., Stafford Co. Quo.

A very small variation in conditions such as turning the separator faster or slower will cause a variation in the



One of Many Fine Creameries of the Eastern Townships

One of the best creameries in the Eastern Townships of Quebec province, and one of the largest in Canada, is the one at Adamsville (Brome Co.) here illustrated. Eastern Townships butter has the

cream test. There are so many factors that determine the test of cream and that may cause a wide variation from week to week that it is possible for the test to vary where the testing is done with absolute accuracy. There are at least eight reasons why the farmer or dairymen does not always get the same test from day to day, and still may get all there is in the cream from his hand separator.

1. Often a change in operators will cause a variation in the richness of the cream. One may not turn as fast as another; and, the faster a separator is turned, the higher will be the cream test. It will be higher, but there will be a smaller quantity of cream; and nothing is gained by turning the machine faster than is required for absolute accuracy.

2. The temperature of the milk has much to do with the thickness of the cream. Cold milk has a tendency to give a high test.

3. If the faucet on the supply can be partly shut off, or becomes somewhat clogged, as with a small stick, some hair, or dirt, it shuts off a part of the feed; and the test is higher, because the milk does not go through as fast as usual and is subjected to centrifugal force in the machine for a longer time.

4. If the test of the herd varies, some cows test high and others low, and milk is saved out from the high testing cows for the house and not separated, and the next time the low testing whole-milk is saved, there will be a change in the test. That is, a change in the richness of the milk separated will change the test.

5. The use of too much warm water or skim milk in flushing the bowl will lower the cream test.

6. All cream separators have a mechanical device for changing the thickness of the cream, known as the cream-screw. This is usually located in the upper part of the bowl. Turning the cream-screw towards the centre of the bowl, or in, gives a thick

cream; and turning it out a thin cream.

7. If a small particle of dirt becomes lodged in the cream-screw it will change the test, producing a thicker cream.

8. When the separating has been done, the cream should be set at once in very cold water to cool it down. This, of course, furnishes excellent cream, not only for butter-making purposes, but for house use as well; and often the housewife, little thinking of the effect it will have on the cream test, goes out in the morning and dips off a couple of cupsful from the previous night's skimming. The thickest cream rises to the top, and two cupsful taken from the top after standing will materially lower the test—much more than one would at first imagine.

Dairy Export Trade for 1910-11

Mr. J. A. Ruddick, Dominion Dairy Commissioner, has recently published statistics showing the value of our export trade in dairy produce for the year ending March 31, 1911, and a

comparison is made with the previous two years. The figures are as follows:

Products	1911	1910	1909
Cheese	\$20,739,557	\$21,607,692	\$20,384,666
Butter in home	745,238	1,016,772	1,523,436
Cond. Milk	469,406		
Cream	1,714,538	541,372	90,530
Gasson	37,000		
Fresh milk	5,391		

Total: \$23,719,179 \$23,119,336 \$23,996,622

It will be observed that the total value of the exports of dairy products shows an increase during the past two years, notwithstanding the lower price obtained for cheese in 1910. If the price of cheese had ruled as high in 1910 as it did in 1909 the exports for the past year would have totalled about \$25,000,000. If the annual increase in home consumption is also taken into account, we have ample evidence of a steady growth in dairy production.

Mr. Geo. H. Barr, Chief of the Dairy Division, and other members of the staff are now engaged in completing the investigation begun last year in connection with the care and handling of cream intended for cream-gathering creameries. This work is being carried on at Renfrew, Ont., and it is hoped to complete the series of experiments early in the season.

The latest advices from New Zealand, dated May 5th, show a decrease of 10 per cent. in the shipments of cheese from that country for the season of 1910-11 as compared with the previous season. The total shipments of New Zealand cheese to May 5th, which is practically the end of the season, amount to 43,265,000 pounds or about 550,000 boxes of cheese. Shipments of butter are practically the same as last year, there being only a very slight decrease. As against the decrease from New Zealand the shipments of butter from Australia have shown an increase of 49 per cent. over the season 1909-10, the total shipments up to May 5th being 92,626,240 pounds.



A POPPED QUESTION

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De Laval Cream Separator

or do with a poor imitation?

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FARM AND DAIRY
PETERBORO, ONT.

FINALLY A SHARPLES Tubular Cream Separator FOR YOU



Others have tried disk-filled and cheap cream separators—and discarded them for Tubulars. They paid dearly to learn that disks are not needed in a modern separator, and that cheap separators lose their cream in wasted cream the first year. Why should you buy the same expensive experience?

You will finally have a Tubular, because Dairy Tubulars are better than, different from and superior to all others. No disks. Twice the skimming force of others. Skin faster and twice as clean. Built in the only known way which overcomes the many parts and faults of others. Patented. Cannot be imitated.

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Cheese Department

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

Sidelights on Eastern Instructor's Trip

Each of the seven factories in the Belleville district, inspected by the Eastern Ontario dairy instructors, as reported in Farm and Dairy last week, were well equipped for the making of good cheese and for the disposal of the whey. All had well insulated cool curing rooms, all but one had elevated steel whey tanks, and almost without exception are found in the Belville district. The make of the smallest factory visited exceeded 200,000 lbs. These factories were all strong in the very points in which the small factories of the extreme eastern districts are weak; therefore, the trip gave to the visiting instructors a good idea to carry away, and instill into the makers, and patrons in those districts of Eastern Ontario where small and ill-equipped factories are the rule.

Possibly there is not in Ontario another cheese factory section where there are as many or as good cool curing rooms as are found in the Belleville district. At all of the factories visited by the instructors the cheese are held for at least 10 days from the making. At Foxboro the cheese are usually held for two and a half weeks. "Were all of our Ontario cheese held for a month in curing rooms such as this one at Foxboro," said Mr. Publow, "we would have cheese worth talking about, and cheese that would bring the price."

All of the curing rooms inspected had cement floors except the one at Sidney, where wooden floors were giving good satisfaction. At the Mountain View factory a press room adjoins the cool curing room and here the cheese is kept one day to dry out from the hoops. At Foxboro Mr. Publow said that this preliminary drying was to be preferred to placing the cheese immediately under cool curing conditions. A good idea in connection with the Bayville factory was the boxing room. The cheese are taken into a small room adjoining the cool curing room, and are there boxed ready for shipping. The curing room, therefore, is not open while shipping and the temperature is not reduced. It was noticed that wherever the maker had trouble with mold in the cool curing room, the ceilings were low. High ceilings give good ventilation, and then there is not much chance of mold. At Sidney Town Hall mold was somewhat in evidence, and Mr. Publow recommended that

the shelves all be brought outside and exposed to the rays of the sun for several hours and white washed and used in the room in liberal quantities.

The cost of making over their old curing rooms in cool curing rooms at these factories had varied from \$400 to \$600. In every case the curing room was looked upon as an excellent investment. Mr. Holgate, president of the Foxboro factory, claimed that their added returns would every year pay the first cost of installing the cool curing facilities.

DISPOSAL OF WHEY
Every effort is made at these factories to dispose of the whey in a manner that will not create unsanitary conditions around the factory. At two or three of the factories visited, however, underground cement whey tanks were in evidence and were not giving very good satisfaction, the whey seeping through the cement and saturating the soil. The steel tanks in all cases were perfectly satisfactory. The surplus whey was run out of the tanks into the drains each day.

At the Massassaga factory two oil barrels had been sunk in the ground one on top of the other, and from the bottom a six inch pipe conveyed the whey to a stream several hundred yards distant. This plan was giving the best of satisfaction. At the Quinte factory, Mr. I. Hicks, the maker, pointed out with pride to the cement platform beside the whey tank in which the teams stood when taking their load of whey. This prevented the dirty, stinking puddle that is so often in evidence beside the whey tank at these factories.

TO AVOID BROKEN BOXES
Attention was called to the method of nailing in the bottoms of these boxes at these factories. The most common method is to nail the sections to is to have a double head. The preferable way is to have the bottom nailed inside both the side of the box and the lower hoop. Mr. Publow stated that on his recent trip to Montreal he noticed that 90 per cent. of the broken boxes had the bottoms nailed to the hoop only.

Another feature that attracted particular attention was the sanitary sites selected for the cheese factories. They were not situated in hollows, but were high and dry. The Quinte and Foxboro factories were particularly well situated in this respect. Screens in doors for the exclusion of flies were in evidence at several of the factories.

Result of the Extreme Heat

P. A. B. Cherry, O.A.C., Guelph.
For the week June 29th-July 5th, excessive heat has been felt all over Ontario—hotter, perhaps, than has been experienced for any considerable number of years. Many farmers will be asking themselves and their neighbors how this sudden rise in temperature has affected their milk. All know (or should know) how the quantity has been affected, and in most cases we will find that the milk production has gone down considerably owing to the dried-up nature of the pasture and the inconvenience experienced by the cows.

Now, Mr. Farm and Dairy reader, how has your test been affected? The test is an important item, especially with those who send their milk to the cheese factory, and are paid according to test.

Some will argue that as the quantity has gone down, the quality has gone up. This supposed is a good argument, too, but the following results will show it to be in the wrong. These results were taken from 46 tests of patrons' milk as delivered at one of the well known cheese factories in the Listowel district. Each day for five days the milk was tested for both fat and casein, and the weights noted. The patrons selected for the test on

the first day were kept to throughout the five days.

The following are the results of the tests:

Patrons' No.	Percentage of Butter Fat					Percentage of Casein				
	1st Day	2nd Day	3rd Day	4th Day	5th Day	1st Day	2nd Day	3rd Day	4th Day	5th Day
1	3.4	3.1	3.3	2.9	3.2	2.1	2.1	2.1	2.1	2.1
2	3.4	3.1	3.3	2.9	3.2	2.1	2.1	2.1	2.1	2.1
3	3.3	3.2	3.1	2.7	2.7	2.2	2.2	2.2	2.2	2.2
4	3.6	3.6	3.5	3.3	3.3	2.3	2.3	2.3	2.3	2.3
5	3.9	3.7	3.6	3.4	3.4	2.4	2.4	2.4	2.4	2.4
6	3.2	3.1	3.1	2.9	2.8	2.4	2.3	2.3	2.3	2.3
7	3.5	3.3	3.1	3.1	3.1	2.2	2.1	2.1	2.1	2.1
8	3.5	3.2	3.1	3.0	3.0	2.3	2.3	2.3	2.3	2.3
9	3.4	3.3	3.2	2.9	2.9	2.4	2.4	2.4	2.4	2.4
10	3.7	3.2	3.2	3.0	3.0	2.2	2.2	2.2	2.2	2.2

Less milk was delivered on the first day than on the first by all patrons but No. 10. On the last day of the test it was calculated that over 10 pounds of milk were required to manufacture one pound of cheese. A decreased quantity was here accompanied by a falling off in quality as well. The casein tests here given are exceptionally low.

Cool Curing in Small Factory

Editor, Farm and Dairy.—In reply to the query of Mr. A. J. Stackhouse in Farm and Dairy of June 29, regarding the advisability of installing a cool curing room in a cheese factory with a 50 ton output, I must say that it is a good thing to have a cool curing room in any factory, and especially in a small one, as we often in a small factory it is necessary to hold cheese longer than when they are having a large make. I have no hesitation in recommending a cool curing room for any cheese factory.

The Dairy Department will be glad to furnish blue prints and any necessary information required in connection with building cool curing rooms.—Geo. H. Barr, Chief, Dairy Division, Ottawa.

FOR SALE AND WANT COLUMN

GOOD CREAMERY FOR SALE—Box D, Farm and Dairy, Peterboro, Ont.

WANTED—Young man to work in cheese factory in South Peterboro; must be a good habit; state price per month.—G. W. Lane, Villiers, Ont.

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THE future destiny of the child is always the work of the mother.—Bonaparte.

The Second Chance

(Copyrighted)

NELLIE L. McCLUNG

Author of "Sowing Seeds in Danny"

CHAPTER I.

MARTHA
In the long run all love is paid by love.
The undervalued by the hosts of earth.

The great eternal government above keeps strict account, and will reward its worth.
Give thy love freely; do not count the cost;

So beautiful a thing was never lost.

In the long run
Ella Wheeler Wilcox.

THOMAS PERKINS was astonished beyond words. Martha had asked for money! The steady, reliable, early-to-bed, early-to-rise Martha—the only one of his family that was really like his own people. If he could believe his senses, Martha had asked for two dollars in cash, and had distinctly said that due bills on the store would not do!

If Martha had risen from her cradle twenty-five years ago and banged her estimable parent in the eye with her small pink fist, he could not have been more surprised than this was now! He stared at her with all this in his face, and Martha felt the ground slipping away from her. Maybe she shouldn't have asked for it!

She went over the argument again. "It's for a magazine Mrs. Cavers lent me. I would like to get it every month—it's got lots of nice things in it." She did not look at her father as she said this.

Thomas Perkins moistened his lips. "By George!" he said. "You youngsters never think how the money comes. You seem to think it grows on bushes!"

Martha might have said that spring frost must have nipped the buds for the last twenty-five years, but she did not. Ready speech was not one of Martha's accomplishments, so she continued to plead her apron into a fan and said nothing.

"Here the other day didn't I send thirty-nine dollars into Winnipeg to get things for the house, and didn't I get you an eighteen-dollar wallaby coat last year, and let you wear it week-days and all, and never said a word!"

Martha might have reminded him that she was watering and feeding the stock, and saving the wages of a hired man, while she was wearing the wallaby coat, but she said not a word.

"You get a queer old lot more than I got when I was a young shaver, let me tell you. I've often told you young ones how I left home when I was nine years old, with the wind in my neck—that's all I got from home—and with about enough clothes on me to flag a train with. There wasn't any of these magazines then, and I don't know as they do any good anyway. Poor old Ann Waters sent away her good, hard-earned dollar to some place in the States, where they said: 'Send us a dollar, and we'll show you how to

make fifty light employment; will not have to leave home; either ladies or gentlemen can do it.' She saw this in a magazine and sent her dollar, and what she got was a pretty straight insult, I think. They wrote back, 'Put an advertisement like ours in your paper, and get fifty people like yourself to answer it.' There's a magazine for you!"

Martha looked at him helplessly. "I promised Mrs. Cavers I'd take it. She's making a little money that way, to get a trip home this Christmas," she said, looking and unhooking her fingers, the rough, totem joints of which spoke eloquently in her favor; if the old man had had eyes to see them.

"You women are too easy," he said. "You'll promise anything for her poor grandmother let a man put a piano in the shed once when it was raining, and he asked her to sign a paper sayin' it was there, and he could come any time he liked to get it, and, by Jinks! didn't a fellow come along in a few days wantin' her to pay for it, and showing her her own name to a note. She wasn't so slow either, for she parted with the piano, and puttin' a grab for it, and tore her name off; but it gave me father such a turn he advertised her in the paper that he would not be responsible for her debts, and he never put his name to paper of any kind afterward. There was a fellow in the old Farmers' Home in Brandon that asked me father to sign his name in a big book that he showed up in front of him, and I tell you it was all we could do to keep the old man from hittin' him. Of course, Martha, if ye didn't put it down in writin' she wouldn't be puttin' it down in the deuce alotter."

"But I want to give it," Martha said slowly. "I want the magazine, and I want to help Mrs. Cavers. And now, Martha, look at here," the old man said, "you're a real good girl, and very like my own folks—in the way you handle a hoe yer just like my poor sister Lizzie that married a peddler against all our wishes. I mind how she kissed me, and says she: 'Good-bye, Tommy, don't forget to shut the henhouse door,' and in the mornin' she was gone." I mind how she kissed me, and says she: "Lizzie's bereaved brother wiped his eyes with a red handkerchief, and looked dreamily into the fire."

Martha, still pleading her apron, stood awkwardly by the table, but instinctively she felt that the meeting had closed, and the two-dollar bill was still inside.

She went upstairs to her own room. It was a neat and pretty little room, and the wife of Martha's little, but to-night Martha's heart had nothing in it but a great loneliness, vague and indefinite, a longing for something she had never known.

A rag carpet in well-harmonized

stripes was on the floor; a blue and white log-cabin quilt was on the bed; over the lace-edged pillow covers there hung embroidered pillow shams. One had on it a wreath of wild roses encircling the words "I sleep and dreamed that life was Beauty," while its companion, with a similar profusion of roses, made the correction: "I waken and know that life was Duty." Martha had not chosen the words, for she had never even dreamed that life was beauty. A peddler (not the one that had beguiled her Aunt Lizzie) who was storm-stayed with them the winter before, and he had given her these in payment for his lodging.

She sat now on a little stool that she had made for herself of empty tomato cans, covered with gaily flowered cretonne, and drawing back the muslin frilled curtains, looked wearily over the fields. It was a pleasant scene that lay before Martha's window—a long reach of stubble fields, stretching away to the bank of the Souris, flanked by poplar bluffs. It was just a mile long, that field, a wonderful stretch of wheat-producing soil; but to Martha it was all a weariness of

Tell Your Friends

"The Second Chance," the first instalment of which appears in Farm and Dairy this week, is one of the greatest serial stories ever run in a farm paper. Mrs McClung is one of the most popular of present day writers. "The Second Chance" is her masterpiece. It is a story that will reach the hearts of a readers, and the quaint humor of "Pearlie Watson" will be pleasing to all. Tell your friends about our great serial story. Save the first few copies for your friends who may miss the first few numbers, and will wish to read the first of the story later on.

the flesh, for it meant the getting of innumerable meals for the men who ploughed and sowed and reaped thereon.

To-night, looking at the tall elms that fringed the river bank, she tried to think of the things that had made her happy. They were getting along well, there had been many improvements in the house and out of it. She had better clothes than ever she had; the trees had been lovely this last summer, and the garden never better; the lilacs had bloomed last spring. Everything was improving except herself, she thought sadly; the years that had been kind to everything else were cruel to her.

With a sudden impulse, she went to the mirror on her dressing-table, and looked long and earnestly at her image there. Martha was twenty-five years old, and looked older. Her shoulders were slightly bent, and would suggest to an accurate observer that they had become so by carrying heavy burdens. Her hair was lay-colored and broken. Her forehead and her eyes were her best features, and her mouth, too, was well formed and firm, giving her the look of a person who could endure.

To-day, as she sat leaning her head on the window sill, Martha's thoughts were as near to bitterness as they had ever been. This, then, was hard work, all her small economies. She had not been able to get even two dollars when she wanted it. She sat up straight and looked sadly into the velvet dusk, and the tears that had been long gathering in her heart came slowly to her eyes; not the quick glittering tears of childhood, that can be soon chased away by smiles—not that kind, no, no; but the slow tears that soak at wither, the tears that make one old.

It was dark when Martha lifted her head. She hastily drew down the blind, lit the lamp, and washed away all traces of her tears. Going to a cupboard that stood behind the door, she took out a piece of fine embroidery and was soon at work upon it.

Hidden away in her heart, so well hidden that no one could have suspected its presence, Martha cherished a sweet dream. To her stern sense of right and wrong it would have seemed improper to think the thoughts she was thinking, but for the fact that they were so idle, so vain, so futile, so hopeless. It had all begun the fall before, when, at a party at one of the neighbors', Arthur Wemyas, the young Englishman, had asked her to dance.

He had been so different from the young men she had known, so courteous and gentle, and had spoken to her with such respect, that her heart was swept with a strange, new feeling, that perhaps, after all, she might be for her the homage and admiration she had seen paid to other girls. In her innocence of the world's ways, good and bad, she did not know that young men like Arthur had been taught to reverence all women, and that the deference of his manner was nothing more than that.

Martha fed her heart with no false hope—she never forgot to remind herself that she was a dull, plain girl—and even when she sat at her embroidery and let the imagination of her heart weave for her a golden dream, it was only a dream to her, nothing more!

When Arthur loughed Jim Russell's quarter-section and began farming independently, the Perkinses were his nearest neighbors. Martha baked his bread for him, and seldom gave him his basket of newly made loaves that it did not contain a pie, a loaf of cake, or some other expression of her goodwill, all of which Arthur received very gratefully.

He never knew what pleasure it gave her to do this for him, and although she knew he was engaged to be married to a young lady in England, it was the one bright evening of the week for her when he came over to get his weekly allowance.

Martha had never heard of unrequited love. The only looks she had read were the Manitoba Readers as far as Book IV, and they are noticeably silent on the affairs of the heart. In the gossip of the neighborhood she had heard of girls making "a dead set" for fellows who did not care a row of pins" for them, and she knew it was not considered a nice thing for any girl to do; but it came to her now clearly that it was not a subject for mirth, and she wondered why any person found it so.

As for Martha herself, the tricks of society were foreign to her, unless flaky biscuits and fancy breads may be so called; and so, day by day, she went on baking, scrubbing, and sewing, taking what happiness she could out of dreams, sweet, vanishing dreams.

CHAPTER II. THE RISING WATSONS

There is ever a song somewhere, my dear.

There is ever a something sings always:
There's a song of the lark when the skies are clear.

And the song of the thrush when the skies are gray.

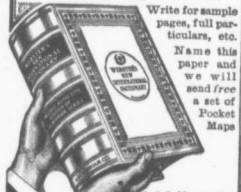
—James Whitcomb Riley.

While Martha Perkins was weaving sweet fancies to beguile the tedious hours of her uneventful life, a very different scene was being enacted, a few miles away, in the humble home of John Watson, C. P. R. section-man, in the little town of Millford, where, with his wife and family of nine were working out their own destiny. Mrs. Wat-

son up to this time had spent very few of the daylight hours at home, having a regular itinerary among some of the better homes of the town, where she did half-day stands at the washub, with a large grain sack draped around her portly person.

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By L. H. Pammel, B. Agr., M. S., Ph. D.

Professor of Botany, Iowa State College, and Botanist, Iowa Agricultural Experiment Station

THE loss caused by weeds amounts annually to hundreds of millions of dollars. The weed question, therefore, is both important and vital to every tiller of the soil. Until the appearance of this booklet, there has been available no modern, up-to-date, authoritative work on the subject. In bringing together the latest knowledge about weed eradication Professor Pammel has performed a task that will be useful for all time to come. It is peculiarly fitting that this book comes from this author. He is the master workman of the country; and his book is the result of study, investigation and observation for a long lifetime.

The important weed problems are discussed from a broad viewpoint. The text matter has been arranged in pedagogical order, making the book useful for both high school and colleges. It is a book for every one who teaches flowers and practical botany, especially weed subjects. Then, too, for the practical suggestions there are in this present, turn to this book and get the suggestion for its correction. In a hundred ways the farmer, landowner, gardener and park superintendent will find the book helpful and authoritative.

Prof. P. Illustrated, 5 by 7 inches, Cloth, \$1.65, Post Paid. BOOK DEPT., FARM AND DAIRY

while the family at home brought themselves up in whatever way seemed best to them.

One day the fortunes of the Watson family silently changed, and in such a remarkable way it soon convinced the most sceptical of the existence of good working fairies. A letter came to Pearl, the eldest girl, from the Old Country, and the letter contained money!

When it became known in the community that Pearl Watson had received a magnificent gift of money from the young Englishman who had nursed while she was working for Mrs. Sam Motherwell, it created no small stir in the hearts of those who had to do with other young Englishmen. Parents across the sea, rolling in ancestral gold and Bank of England notes, acquired a reality they had never enjoyed before. The young chore boy who was working for five dollars a month in George Steadman's never knew why Mrs. Steadman suddenly let him have the second helping of butter and also sugar in his tea. Neither did he understand why she gave him an onion and a piece of his aching ear, and laid to rub into his chapped hands. Therefore, when she asked him straight about his folks in the Old Country, and "how they were fixed," he, being a dull lad, and not quick to see an advantage, foolishly explained that he "didn't 'ave no body belongin' to him"—whereupon the old red rooster and Ma'll have was as suddenly resting second helpings.

On the Monday morning after Pearl's return home she was the first person up in the house. She made the porridge and set the table for breakfast, and then roused all the family except Danny, who was still allowed the privilege of sleeping as long as he wished and even encouraged in this.

After the family had eaten their breakfast Pearl explained her plans to them. "Ma," she said, "you are not to wash any more, and isn't it lucky that Mrs. G's new Englishwoman across the track there in 'Little England,' that'll be glad to get to do, and no one'll be disappointed, and we'll go to the store to-day and get the Sunday suits all ready for the week-lads and all, and get them fixed up to go to Sunday school and church twice a day. You'll have to learn what ye can while the clothes last. Mary'll send us the money for the fur-lined capes, and Ma'll have the fur-lined cape; and yer old coat, Ma, can be cut down for me. Camilla'll help us to buy what we need, and now, Ma, let's get them ready for school. Money's no good to us if we haven't education, and it's education we'll have now, every last wad of us. Times has changed for the Watsons! It seems as if the Lord sent us the money for a reason. He can't bear to have people ignorant if there's any way out of it at all, at all, and there's nearly always a way if people'll only take it. So, Ma, get out a new bar of soap and let's get at them!"

But in spite of all Pearl and her mother could do, there was only enough clothing for two little boys, and Patsy had to stay at home; but Pearlie beguiled him into good humor by telling him that when he grew to be a man he would keep a big jewelry store, and in preparation therefor she set him to work draped in a nightdress of his mother's, to cut watches and brooches from an old Christmas catalogue.

"Now, Mary, alanna," Pearl continued, "you're to go to school, too, and make every day count. There's lots to learn, and it's all good. Get as much as ye can every day. I'm coin' myself, you see, when get things fixed up and in the clothes. We've got the money to get the clothes, and we'll go as far with it as the clothes'll last."

When Pearl, Mrs. Watson, and Camilla went that day to purchase

clothes for the family, they received the best of attention from the obliging clerks. Mr. Mason, the proprietor, examined the cheque, and even went with Pearl to the bank to deposit it.

Then came the joyous work of picking out clothes for the whole family. A neat blue and white hairline stripe was selected for Jimmy, in preference to a pepper-and-salt suit, which Pearl admitted was for Jimmy, but would not do for Jimmy, for it seemed to be making fun of his freckles. A soft brown serge with a white belt with two gold bears on it was chosen for Tommy and Patsy—just alike, because Pearl said everybody knew they were twins, and there was no use degrading it now. A green and black plaid was bought to make Mary a new Sunday dress, and a red and black plaid for "days." Pearl knew that when Mary was telling a story to the boys she always clothed her leading lady in plaid, and from this she inferred how Mary's tastes ran! Stockings and shoes were selected, and an assortment of underclothes, towels, handkerchiefs, scarfs, and overshoes assembled.

It was like a dream to Pearl, the wildest, sweetest dream, the kind you



An Attractive and Exceedingly Comfortable Home

Probably as fine a farming district as one may ever see is the South Pars Plains in Brant Co., Ont. The soil is of a high level enough to drain well, been thoughtful and appreciative of good homes, a great many of which, like the editor of Farm and Dairy, showing the home of Mr. E. A. Smith, Brant Co., Ont.

lie down and try to coax back again after you wake from it. She could not keep from feeling Danny's Lrown suit and stroking lovingly his shiny brown shoes.

Then came a "stuff" dress for Ma, and Sunday suits for Pa, Teddy, and Billy. By this time the whole staff were busy helping on the good work. Mr. Mason had no fur-lined capes in stock, but he would send for one, he said, and have it still in time for Sunday, for Pearl was determined to have her whole family go to church Sunday morning.

"My, what an outburst of good clothes there'll be," Camilla said. "Now, what are you going to have for yourself?"

Pearl had always dreamed of a wine-colored silk, but she hesitated now, for she had heard that silk did not wear well, and was a material for rich people only, but that did not prevent the dream from coming back. While Pearl was thinking about it, Mr. Mason and Camilla held a hurried conference.

"What about your favorite color, now, Pearl?" Camilla asked. "Isn't it wine-colored silk you always wish for when you see the new moon?"

Pearl admitted that it had been her wish for quite a while, but she wanted to see overcoats first so overcoats were bought and overcoats sent on approval. There were yards and yards of flannelette bought to be made into various garments. Pearl was going to have a dressmaker come to the house, who, under Camilla's direction, would make all sorts of things for the Watsons.

Pearl's purchases were so numerous

that two packing boxes were sent up on the drag wagon, and it was a proud mooncar-fairy when she saw them carried in and placed in the middle of the "room."

"Now set down," Pearl said firmly. "Every wad of ye set on the floor, a none of yer stuff can fall, and I'll give ye what's for ye. But ye must put them on till Sunday morning, that's the Sunday things, and ye can't put on any of them till to-morrow mornin', when yer all be as clean as bet water and Lar soap can make ye, for me and Ma are going at ye all to-night. There's nothin' looks more miserable than a good suit of clothes with a dirty neckband, forment it."

Everybody did as Pearl said, and soon their arms were full of her purchases. Danny was so delighted with the gold bears that he quite neglected to look at his suit. Tommy was rubbing his chin on his new coat to see how it felt. Patsy was hunting for pockets in his, when someone discovered that Bugsey was in tears, idle, out-of-place tears! Mrs. Watson, in great surprise, inquired the cause, and after some coaxing, Bugsey whimpered: "I wish I'd always knew I was goin' to get them!"

Mrs. Watson remonstrated with

him, but Pearl interposed gently. "I 'ave him alone, Ma; I know how his feels! He's enjoyin' his cry as much as if he was laughin' his head off!"

An hour was spent in rapturous inspection, and then everything was placed carefully back in the boxes.

That night, after supper, there came a knock at the door, and a long pasteboard box, neatly tied with wine-colored ribbon, was handed in. On its top it read "Mrs. P. Watson," and after the name of "With the compliments of Mason & Meikle."

"Excitement ran high," Mrs. Watson said. "Don't stand there 'er in' at it. There'll be something in it, maybe."

There was something in it for sure. There was dress length of the softest, springiest silk, the kind that creaks when you squeeze it, and it was of the shade that Pearl had seen in her dreams. There were yards of silk braid and of cream net. There were sparkling buttons, a pair of silk thread, and a "neck" of cream filling with silver spangles on it, and the bottom of the box, rolled in tissue paper, were two pairs of embroidered black patent leather slippers that you could see your face in!

"Look at that now!" Mrs. Watson exclaimed. "Doesn't it beat all!"

(To be continued.)

It is well to bathe the towels when bathing a baby or an invalid. They dry the skin more quickly and that moist sticky feeling that so often follows a bath is avoided.

The
We Sho

For God ha
and of a n
There is n
fect love
fer bath to
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The Upward Look

We Should Banish Fear
No. 16

For God hath not given us the spirit of fear; but of power, and of love, and of a sound mind.—II Peter, 1:7
There is no fear in love; but perfect love casteth out fear; because fear hath torment. He that feareth is not made perfect in love.—I John, 4:18

There is a power contained in each of these two verses that is so stupendous the human mind cannot grasp its immensity. It is a power so great that if we will but trust it and test it, it will break the hold Satan has on us, and transform us into strong, courageous men and women, able to bear and do all things that are right and worthy. It is the power of God.

Our fears are our worst enemies. They hold us in continual slavery. They stay us from doing those things that we know that we should. They prevent our lives from growing and expanding as they would could we but shake them off and use to the full the powers with which God has endowed us. Our lives are stunted and shrivelled by our fears.

Most Christians do not appear to realize that the spirit of fear is a spirit sent into our lives by Satan in order that he may thwart our God-given

impulses to develop the great powers that are within us. There is no limit to the power that is within each of us, no matter how humble, or poor or ignorant we may be. Each of us has,

our lives so will our characters grow in power and influence until we are enabled to accomplish wonderful things for God. The word of God is full of recorded instances where the

and He will help us; Satan whispers that we are not able to do it, and that we shall surely fail. God tells us to trust in Him, and He will give us the victory. Satan answers that we are not strong enough to do so, and that people will laugh at us if we try and then fail. God tells us not to take any anxious thought for the morrow. Satan informs us that all manner of evil is sure to befall us if we do not do as our foolish fears prompt us. God tells us to ask and it shall be given unto us. Satan whispers that that is not so, that we are too full of sin or too weak to expect our petitions to be answered by the Lord.

And thus the ceaseless fight goes on in our lives. God's power ever striving to draw us up into higher and better spheres of action; Satan constantly holding us back by our fears and lack of belief.

If, therefore, we desire to become better men and women let us never forget the assurances given in our texts: That God instead of giving us the spirit of fear has given us the spirit of power and of love (His own spirit) and of a sound mind, and that when we find fear entering our minds, it matters not in what form, it is a certain sign that we are not loving and trusting God as we should, and that we have not yet been made perfect in love. Do we feel that our lives lack power and love and a sound mind? Then let us realize that it is because we have not accepted the great gift which God offers to each of us.—I. H. N.



American Society Ladies Interest Themselves in Dairy Cattle

The photo herewith reproduced was snapped by an editor of Farm and Dairy at the Robt. Hunter & Sons famous sale of Ayrshire cattle two weeks ago. One of the ladies here shown, Mrs. Erhardt, of West Berlin, Vt., purchased seven animals at the sale for \$3,500.

in some degree at least, the Spirit of God dwelling in us. "Know ye not that ye are the temple of God, and that the Spirit of God dwelleth in you?"—(I Corinthians 3:16). There is no limit to the power of the Spirit of God, and just as we allow this Spirit, working within us, to fashion and mould

rich and mighty were passed by and the poor and humble chosen for the accomplishment of great purposes, for "whosoever shall exalt himself shall be abased, and he that shall humble himself shall be exalted."—(St. Matt. 23:12.)

God whispers to us to have faith.

Try this Thirsty Flour

A very thirsty flour. Absorbs a lot of water. Because it contains so much gluten.

Manitoba wheat is wonderfully rich in sturdy gluten.

And, think of it, FIVE ROSES is milled exclusively from the very cream of the Manitoba wheat berries.

So FIVE ROSES must be awfully thirsty, don't you see.

In your mixing bowl it greedily absorbs more water.

So you get more loaves than usual without using more flour. You use less.

Your flour lasts longer, doesn't it?

Less trips to your dealer.

That's how FIVE ROSES saves money.

Actually saves YOU money.

Use this economical flour.



Five Roses Flour

Not Bleached



Not Blended

Embroidery Designs

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



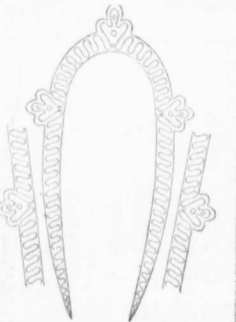
590 Design for a Scalloped Edge or Border. The scallops are one and one-fourth inches in width, three-fourths of an inch in depth. Four yards and four corners are given.



594 Design for Braiding, a Sailor Collar and Rolled-Over Cuffs.



591 Design for Embroidering an Infant's Carriage Cover.



592 Design for Braiding an Over Blouse with Back in Surplice Style. Especially adapted to May Manton Pattern, No. 6891. Transfer patterns for neck and back edges and for the sleeves are given.

A Refrigerator Without Ice

Ice for refrigeration though desirable is by no means a necessity. Our grand mothers got along very well without it. Campers of experience today are equally independent. The idea is simply to have a refrigerator based on the old-fashioned "coolers."

A cooler can be made out of any box that has for its sides slats instead of solid boards. A peach crate makes a very satisfactory one. The box once chosen, all that is needed in the way of construction is to add as many shelves inside as desired, and a door on hinges. Then cover the door, sides and back with burlap or some similar material.

On the top place a pan, preferably enamel, and from this pan hang wicks made of strips of flannel four or five inches in width. These wicks should have one end resting on the inside bottom of the pan, and the other hanging over the edge of the crate and touching the burlap. Then fill the pan with water.

The cooler should be placed outside in a cool place, where the wind can blow upon it. The wicks absorb the water and distribute it through the mesh of the burlap by capillary attraction. The wind causes the moisture to evaporate, and the evaporation reduces the temperature inside the refrigerator. A writer in The

Here's a Home Dye

That ANYONE Can Use.

HOME DYEING has always been more or less a difficult undertaking—Not so when you use



DYOLA ONE FOR ALL KINDS OF DYES

JUST THINK OF IT! With DY-OLA you can color either Wool, Cotton, Silk or Linen. Goods Perfectly with the SAME Dye. No chance of using the WRONG Dye for the Goods you have to color.



There is no need to place the cover of the CYPRUS ROLLER HEARING WASHER all dripping wet on the kitchen floor, because it is hinged and when you give water it drips back into the machine. No post in the centre of the tub to tear and make up the clothes when you take up the room.

Made of Cypress Lumber, and built to last a life-time. Easy to work. Runs on Ball Bearings and will wash anything from handkerchiefs to blankets.

Why should you drudge on in the same old way, when you can do it in half the time and with half the labor by using a Connor Hall Hearing Washer. Write today.

J. H. Connor & Son OTTAWA, ONT. Limited

CAPABLE OLD COUNTRY DOMESTICS

carefully selected, arriving every Monday. Apply now. The Guild, 71 Drummond St., Montreal, or 14 Grenville St., Toronto.

Youth's Companion, in describing such a cooler, asserts that it will keep butter hard and firm on the warmest days in summer.

Have Charity

Be not ready to condemn him. Though he early fall from grace, For sooner you might be condemned Were you in the sinner's place; For the sinner have forgiveness, Learn to live and let to live, As you hope to be forgiven, In your inmost heart "Forgive."

Stop and think before you scorn him, In your haughtiness and pride, Has your inner life been perfect, Have you nothing you would hide? If your hidden thoughts were painted On the pages of a book, Think you they would bear inspection? Would you ask the world to look?

When you stand before your Maker, Looking on the path you've trod, Will your record then be purer Than the sinner's is before God? Is your soul so pure and spotless? Is your heart so free from guile? Are you sure from never sinning, Is your house so strongly built?

When we're casting stones at others Let us think before we throw, Ere the stone might reach another, We might find ourselves in shame, While we long for Heavenly mansions, For that world so bright and fair, Without charity or other, We may never enter there.

THE COOK'S CORNER

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

LEMON RAISIN PIE.

One cup of sugar, one lemon, one cup of raisins, one cup water; chop lemon and raisins fine, cook in the water three-quarters of an hour.

PIDDING SAUCE.

Four tablespoons of white sugar, two tablespoons of butter, one tablespoon of flour, beat all to a cream and add the white of one egg well beaten; then add one gill boiling water; stir well; flavor to taste.

MOLASSES COOKIES.

One cup of molasses, one table-oon of soda; dissolve in half a cup of boiling water; one tablespoon ginger, two tablespoons butter, and flour enough to roll out this; cut with cake cutter, and cook in quick oven.

TAPIOCA CREAM.

Two tablespoons of tapioca dissolved very soft, three yolks of eggs beaten and sweetened to the taste; boil one quart of milk, when cool stir in the tapioca and flavor; beat the whites very light and mix all together; let boil ten minutes, pour into moulds.

ORANGE CREAM.

Make according to above rule, adding one gill of orange juice and the grated rind of one orange which has been previously soaked in the orange juice while the gelatine is dissolving over the boiling water, and the beaten yolks of two eggs when you take off, and quite hot.

CHEERY PUDDING.

A pint of bread crusts or soft crackers, sealed in a quart of lolling milk, piece of butter the size of an egg, one teaspoon of salt, three eggs, one of a half a teaspoon of sugar if eaten without sauce, and if with sauce a tablespoon of sugar; a pinch of pulverized cinnamon, and a quart of stoned cherries; bake quickly.

The Sewing Room

Patterns 10 cents each. Order by number and size. If for children give age; for adults, give bust measure for waists, and give measurements for skirts. Address all orders to the Pattern Department.

CHILD'S YOKE DRESS, 708

The simple little frock changes into a straight line dress. A yoke is one of the most becoming things the tiny child can wear. This one allows a choice of square or low neck and short or long sleeves, so that it suits all seasons.

For the 2 year old will be required 2 1/2 yards of material 27 inches wide, with 4 1/4 yards of banding and 1 1/4 yards of edging to make as shown in the front view, or 3 1/2 yards of material 27 inches wide for yoke as shown in back view. This pattern is cut in sizes for children of 1, 2 and 4 years of age.

FIVE GORED SKIRT WITH DEEP YOKE AND HIGH WAIST, LINE, 708.

The skirt that is made with a deep yoke is a very new one. It can be made of two materials, or of one.

For a woman of medium size, the skirt will require 7 1/2 yards of material 27 inches wide. The material has figure of nap, 3 3/4 yards when material has neither figure nor nap; for the yoke will be needed 1 1/4 yards, 27 or 1 1/4 yards 36 or 1 1/4 yards 42. The width of the skirt at the top is 33 yards and 30 inch waist measure.

PLAIN SHIRT WAIST, 368

This plain shirt waist that is made in peasant style is a new and smart one. This one is finished with the regulating box plait and with regulation sleeves, but it is as simple to make, as the sleeves make part of the waist and do not require fitting to the armholes.

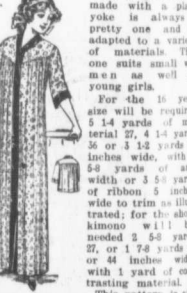
For the medium size will be required 2 3/8 yards of material 27, 2 1/4 yards 36 or 2 1/4 yards 42. This pattern is cut in sizes 24, 26, 28 and 42 and 44 inch bust measure.

KIMONO WITH YOKE FOR MISSIS AND SMALL WOMEN, 701

The simple kimono made with a plain yoke is always a pretty one and is adapted to a variety of materials. The one quite small women as well as young girls.

For the 10 year size will be required 5 1/4 yards of material 27, 4 1/4 yards 36 or 3 1/2 yards 42 inches wide, with 1 1/2 yards of an inch wide or 1 1/2 yards of ribbon 5 inch wide to trim as illustrated; for the short kimono will be needed 2 5/8 yards 27, or 1 7/8 yards 36 or 40 inches wide with 1 yard of contrasting material.

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



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AYRSHIRES

AYRSHIRES AND YORKSHIRES

HIGH-CLASS STOCK FOR SALE
Ayrshire calves and cattle, all ages; Yorkshire pigs and superior sows bred-both sire and grade sire from imported stock.

HON. W. OWENS, ROBERT BINTON
PROPRIETOR MANAGER
Riversdale Farm, Montebello, Que.

BURNSIDE AYRSHIRES

JUST LANDED

12 Bulls fit for service, Scotch winners, 4 2 year old heifers, all bred by brother in Sept. and Oct. They are a grand strong lot of useful sires with good traits. Also a few good year-ings.

IR. R. NEES, HOWICK, QUE.

Ayrshires

World's Champion herd for milk and production. Registered and bull calves, all from R.O.P. cow for sale. A grandson of Primrose of Tangleywild in the lot. Address: WOODDISSE BROS., Tangleywild Farm, ROTHSAI, ONTARIO

THE SPRINGBANK HERD OF AYRSHIRES

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

'La Boie de la Roehes' Stock Farm

Here are kept the choicest strains of AYRSHIRES. Imported and home bred AYRSHIRES—the best bacon types: WHITE OPINGTON, WHITE WYANDOTTES and BARRED ROCK AYRSHIRE. Mon. L. J. FORBET, J. A. BIREAU, Proprietor, Manager. Ste. Anne de Bellevue, Que.

RAVENSDALE STOCK FARM

Ayrshires, Clydesdales, Yorkshires
A few very choice Bull Calves, out of deep milking dams, and sired by "Bencheski Chief" Bull (Imp.) White No. and secure first choice. Females of all ages. A Commercial Herd.

W. F. KAY, PHILIPSBURG, QUE

STONEHOUSE STOCK FARM

Is the home of most of the coveted honors at the leading eastern Exhibitions, including first prize old and young herd. FOR SALE a few choice Young Cows, also Bull Calves.

HECTOR GORDON, HOWICK, QUE.

SUNNYSIDE AYRSHIRES.

Imported and home bred, are of the choicest breeding of good type and have been selected for production. THREE young bulls dropped this fall, sired by "Nether Hall" Bull, and 20 Imp. as well as a few females of various ages for sale. Write or come and see. J. W. LODGE, Howick Station, Que. (Phone in house.) 1-6-11

CHOICE AYRSHIRES

Are Bred at "CHERRY BANK"

A few young bull calves for sale. Write for prices.

P. D. MCARTHUR, North Georgetown, Howick Station on G. T. Ry. Que.

LAKESIDE AYRSHIRES

Special offering of four young bulls, fit for service, and one cow, bred for parturians.

LAKESIDE FARM, PHILIPSBURG, QUE. GEO. H. MONTGOMERY, Prop. 164 St. James St., Montreal.

MISCELLANEOUS

TANWORTH AND BERKSHIRE SWINE—Boars and Bows for Sale. J. W. Todd, Cornish, Ont. Maple Leaf Stock Farm.

FOR SALE—KNIGHTON LODGE YORKSHIRES, 1 Boar, fit for service, 2 sows in farrow, and several young ones of either sex—C. C. Kettle, Wilsonville, Ont.

MARKET REVIEW AND FORECAST

Toronto, Monday, July 10.—Business is fairly healthy before the midsummer lull. Country buyers are more conservative than heretofore, and large rush orders are not expected.

From all parts of the country come reports of late crops. Wheat is short in some sections, and the fruit crop generally will be short, but other crops are excellent. Exports from the Old Country have relieved the market situation in Ontario, but large excursions to the West may assume a scarcity of labor later on. A resume of prices for farm products during the past week shows dairy produce and eggs firm, corn and oats strengthening with cattle weaker all round. Hogs are again decidedly below the \$7 mark. Call money rates here at 5 1/2 to 6 per cent.

WHEAT.

Quotations for wheat on this market are a little lower than a week ago owing to weak cable news from the Old Country. The Chicago market wheat advanced rapidly during the early part of the week owing to reports of damage by heat and drought. At the end of the scarce prices dropped suddenly to their old level. Quotations for the Old Country are: No. 2, 95c; No. 3, 95c. Ontario wheat shows some improvement, but quotations are not so high as last week. On the Farmers' market fall wheat is quoted at 82c to 85c and good wheat 80c to 81c.

COARSE GRAINS.

Trade in coarse grains is quite active. Reports of drought influenced prices at Chicago, and the effect has not passed yet. Oats and corn show decided advances. Quotations are as follows: Oats, Canada No. 1, 43c; No. 2, 42c; No. 3, 41c; local white, 37c; to 38c; outside, 40c; 4c on track here; corn, 64c; peas, 79c to 80c; rye, 71c; barley, 68c to 69c for malting, 55c to 57c for feed; buckwheat, 55c. On the Farmers' Market oats are quoted at 43c to 44c; barley, 68c; buckwheat, 54c; and rye, 71c. At Montreal oats are quiet and corn shows an advance. Canadian Western No. 2 oats are quoted at No. 42c to 43c; No. 1, 43c; No. 2, local white, 39c; to 40c; No. 3, 39c; to 39c; corn, 65c; barley, malting, 55c; feed, 52c; buckwheat, 54c; peas, \$1.65 to \$1.75.

MILL FEEDS.

Quotations here are unchanged, but the market is unsettled. Manitoba bran, \$23; shorts, \$23; Ontario bran, \$22; shorts, \$23.50. At Montreal quotations on mill feeds have declined. Manitoba bran, \$19; shorts, \$22; Ontario bran, \$20; shorts, \$22 to \$22.50.

HAY AND STRAW

Most of the hay arriving on the market is of inferior quality and difficult to sell. Choice timothy finds a ready market. Quotations on track Toronto are: No. 1, timothy, \$12 to \$13; mixed, \$9 to \$10; straw, \$6 to \$6.50. On the Farmers' Market No. 1 timothy is \$14 to \$15; No. 2, \$12 to \$13; straw, bundled, \$13 to \$15; loose, \$6 to \$8. The same conditions apply at Montreal. No. 1 hay is quoted at \$10 to \$11; No. 2, \$8.50 to \$9.

HIDES.

Quotations for hides are decidedly stronger. Prices for dry hides are as follows: No. 1, inspected steers and cows, 12c; No. 2, 11c; No. 3, 10c; calf skins, 15c. Prices paid by country dealers are: Hides, cured, 12c; sheep skins, \$1.25 to \$1.50; lamb, 25c to 30c; spring lambs, 25c to 30c; horse hides, \$5; horse hair, 25c to 35c.

POTATOES AND BEANS.

The market is steady and unchanged. Potatoes are now quoted at \$1.75 a bag for native, and \$1.50 to \$1.75 to \$1.50 a bag in ear lots. At Montreal potatoes are scarce, and prices have again advanced to \$1.40 a bag for Green Mountains.

Beans here are quoted at \$1.85 for primes and \$2.10 for hand picked.

FRUIT AND VEGETABLES.

Excessively hot, dry weather is retarding the crop of small fruits, and the market is firm. Latest quotations are: Strawberries, 12c; raspberries, 15c; to 17c; cherries, 11c; to 12c; blueberries, 10c; to 12c; grapes, 7c; to 8c; radishes, 10c; to 12c; cabbages, 10c; to 12c; head lettuce, doz. 30c; wax beans, bush, 10c to 12c.

EGGS AND POULTRY.

Quotations here for eggs are unchanged.

15c to 15c a doz. in case lots. Montreal prices are 13c and 14c each of Toronto and 17c to 18c on the market. Quotations for poultry are: Chickens, 16c to 15c; fowls, 16c to 17c; turkeys, 28c to 30c; spring ducks, 25c to 28c; alive 4c less.

WOOL.

Wool is taken at the following prices: Washed fleeces, 18c to 20c; unwashed fleeces, 15c to 16c; reject, 15c.

PRODUCE.

The situation with regard to butter and cheese is unchanged. Receipts are liberal and demand quite equal to the supply. Quotations are as follows: Creamery prints, 21c to 22c; solids, 19c to 21c; dairy prints, 17c to 18c; inferior, 15c to 16c. Quotations for eggs are quoted at 14c; fresh, 14c; to 16c; 12c; new twins, 12c.

HONEY.

Wholesale quotations for honey are as follows: Buckwheat, 6c to 7c a lb. in time; 6c in barrels; strained clover honey, 5c; alfalfa, 4c; wild, 3c to 4c. No. 1 comb honey is quoted at \$2 to \$2.25 a doz.

HORSE MARKET.

So little trade is moving in horse lines that it is hard to give actual quotations. Prices are quoted purely nominal as follows: Good heavy drafters, \$250 to \$300; medium weight, \$150 to \$200. Good agricultural horses bring \$150 to \$220, and fair quality ones \$100 to \$150. Express horses are quoted old cheques are quoted at \$15; and saddlers, \$10 to \$20.

LIVE STOCK.

Prices on the live stock markets this past week have averaged lower than on the previous week. The extent here has lessened demand. A week ago to-day's offerings were liberal and prices averaged about 10c to 15c in price previous. About 1,000 head of steers, or half the offering, was acquired by Canadian and United States buyers for shipment to Great Britain. A good price of \$9.25 was paid, but \$6.10 was a good price for good quality cattle in any quantity. Butcher prices are lower in the face of a fair demand.

On the Tuesday market competition was confined to Toronto and Montreal buyers. Prices for butcher steers were unimpaired, but cows were down. Prices held on the trading market of the west, but here there was a drop. It seems that people do not eat much meat in warm weather, and the light run was disposed of at a lower price. The animals showed the effect of burned up pastures, and some of the cattle were in very poor condition. Quotations are as follows: Export cattle, choice, \$5.75 to \$6; bulls, \$4.50 to \$4.50; butcher steers, choice, \$5.75 to \$5.75; common to medium, \$5.55; butcher cows, choice, \$4.60 to \$4.80; common to good, \$3 to \$4.50; bulls, \$4.25 to \$4.75; feeders, \$5.25 to \$5.85; stockers, \$3.75 to \$5; calves, \$1.50 to \$2. Traders in milkers is slow, the demand being only for choice quality. Quotations on milkers are \$6 to \$7; springers, \$2 to medium, \$2.5 to \$3; springers, \$2.5 to \$4.

Sheep are stronger than a week ago, and demand is good at advanced prices. Cows are quoted at \$2.50 to \$4.50; bulls, \$7 to \$8; and lunks and calves, \$2.50 to \$3.25; calves are \$1 to \$7.50.

Hogs suffered a decline the first of the week and have held steady at the lower price; \$7.10 on the market and \$7.45 at country points.

Hot weather has weakened the live stock market. The price of steers has declined 50 cents to 75c. There has been little demand from local butchers, as they have an large supply of hams, which can be conveniently carried in hot weather. Steers sell at \$5 to \$6; cows, \$3 to \$5, and bulls \$3 to \$5. The market for hogs is strong on account of increased offerings even selling at \$3 to \$5.50 and lambs \$3.50 to \$4. Calves are also weaker, \$1.85 to \$5 each.

CHEESE MARKETS.

Montreal, July 8.—The Quebec Cheese Manufacturers' Cooperative Society sold finest cheese at 11c; fine, 11c to 11.75c; No. 2, 11.15c to 11.54c.

The market for dairy 6-3.250 boxes of colored and 1.215 boxes of white. Sales at 11c and 11.75c.

Campbellford, July 4.—1,000 cheese made; all sold at 11.15c.
Napa, July 4.—Full make white and 170 lbs. all sold; 11c; refined white, 11c; all sold at 11c.
Franco, July 7.—Offered, 720; all sold at 11c.
Innisville, July 7.—1,050 colored cheese offered; all sold at 11.18c.
Pictou, July 7.—2,533 boxes, all colored, sold at 12c.
Kempville, July 7.—388 boxes; 110 sold at 11.5c.
Victoria, Que., July 7.—2,000 boxes of cheese sold at 10.78c.
Cowanville, Que., July 8.—1,266 pack aged cheese, and boxes of fresh cheese all sold for 11c. No butter, 21c; offered.
Hwy. Hyacinth, Que., July 8.—600 pack aged butter at 13.5c; 700 boxes cheese at 11c.
London, Ont., July 8.—530 boxes offered, 60 sold at 11c.
Belleville, Que., 6-2.285 cheese offered. Sales were 715 at 11c; 370 at 11.75c and 100 at 11c.

GOSSIP.

A NEW DICTIONARY.

From time to time the value of word changes. Their meanings vary and new words are coined. Technical terms are added to the language. For this reason it has been necessary to revise the dictionary of the English language at regular intervals. Webster's New International Dictionary represents the latest production in this line. This unabridged work contains 2,700,000 and 400,000 words with 5,000 illustrations.

A striking feature of this book is the divided page. The most important of each page is printed in the usual type and contains those words that are likely to be referred to most frequently. The lower part of the page is printed in smaller type and contains words of less frequent occurrence and of less common use. Another feature of this dictionary is that every word and phrase that would naturally be classified together in the first and last words on a page appear on that page.

This Webster's New International Dictionary is a veritable encyclopaedia of knowledge. It is a gem of a dictionary, one volume printed on good paper and published by G. & C. Merriam of Springfield, Mass., as noted in an advertisement on the opposite page. Every home to which Farm and Dairy goes should have an up-to-date, reliable dictionary such as this Webster's New International.

WESTERN FAIR, SEPT. 8th-10th.

A large amount of money is being expended in the management of the Western Fair, London, Ontario, on the grounds and buildings, and they are being put in excellent condition for the coming exhibition. The interior of the large horse building is entirely changed by the large fruit and flower exhibit on the second floor. The interior of the main building is being changed to suit the convenience of exhibitors and visitors alike. The swine pen floors have been raised and considerable money spent on the other stock buildings. The track has

AYRSHIRES

AYRSHIRE BULLS
Young Bulls all ages up to one year. Tam fit for immediate service, all from R.O.P. sires and good prices. Write for catalogue. James Bode, St. Thomas, Ont. R. R. No. 1.

EGGS & CALVES WANTED

Farm and Dairy
Would like to purchase Yorkshire Boars, Chester White Boars, Ayrshire Heifer Calves and Holstein Heifer Calves from 6 to 8 weeks old.

Write Circulation Manager FARM AND DAIRY Peterboro, Ontario

giving prices and ages of animals

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THE ALLIS

is editor of Farm & Dairy recently visited Chesterville, the proprietor of the farm, the manager of the farm. The farm seems destined to stock farms. J. A. Allison bought up the considerable water power in the vicinity of the farm. A handsome hotel at a cost of \$100,000 has been built. The farm has been built by the owner. J. A. Allison has been built by the owner.

CRUMB'S STAN

is a large amount of money is being expended in the management of the Western Fair, London, Ontario, on the grounds and buildings, and they are being put in excellent condition for the coming exhibition. The interior of the large horse building is entirely changed by the large fruit and flower exhibit on the second floor. The interior of the main building is being changed to suit the convenience of exhibitors and visitors alike. The swine pen floors have been raised and considerable money spent on the other stock buildings. The track has

AYRSHIRES

AYRSHIRE BULLS
Young Bulls all ages up to one year. Tam fit for immediate service, all from R.O.P. sires and good prices. Write for catalogue. James Bode, St. Thomas, Ont. R. R. No. 1.

EGGS & CALVES WANTED

Farm and Dairy
Would like to purchase Yorkshire Boars, Chester White Boars, Ayrshire Heifer Calves and Holstein Heifer Calves from 6 to 8 weeks old.

Write Circulation Manager FARM AND DAIRY Peterboro, Ontario

giving prices and ages of animals

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reached and put in excellent condition the interior of the ring has been made, making a great improvement in the harness horse. The new lists, entry forms, and all information on application to the secretary, J. H. London, Ont.

A visitor in Sarnia, Ontario, one of most interesting plants there is that of the Sarnia Glass Co. This plant covers an area of 110,000 sq. ft. In this building are located the five looms which are the largest machines consuming material. The plant employs 30 men and runs 100 miles of glass a day, which is shipped to the farmer. This means an output of 100,000 lbs. of glass a day, although this plant has not been in operation a year, the demand far exceeds the supply of the factory, and the manager is planning to enlarge their plant by building 135,000 sq. ft. in which will be placed eight additional looms. In addition the factory will turn 100 miles of wire fence every day at present. Nowadays the farmer can get town and sell them, and with proceeds buy wire fence with which to enclose the old rail fence.

HOLSTEIN-FRIESIAN NEWS

Farm and Dairy is the official organ of the Canadian Holstein-Friesian Association, all of which members are readers of the paper. Members of the Association are interested in Holstein breeders for publication in this column.

THE ALLISON STOCK FARM
The editor of Farm and Dairy paid a visit recently to the Allison Stock Farm, Chesterville, Ont. Dundas county, proprietor of the farm is Mr. H. J. Allison, the manager, who is probably the best stock farmer in the country. The farm comprises 300 acres, and seems destined to become one of the best stock farms of the country.

Mr. H. J. Allison, who was born and brought up on the farm, has accumulated considerable wealth in business, and purchased the Allison Stock Farm in 1908. A handsome residence has been erected at a cost of about \$8,000. Large barns are being built, and the present barn is 300 by 40 feet, and the new barn 360 by 24 feet. These two barns will be connected by a wing 150 by 30 feet.

CRUMB'S IMPROVED WARRIORS STANCHION

Henry H. Crumb, Berlin, N.J., writes: "My stanchion is the best I have ever used, and I recommend it to the owners of my cows."

WHY TORTURE YOUR COWS WITH RIGID STANCHIONS?

Send for specifications and descriptive literature of this new and improved type of stanchion.

W. H. CRUMB, Berlin, N.J., U.S.A.
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HOLSTEINS
'LES CHEVAUX FARMS'
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HOLSTEINS—Winners in the ring and on the stall. Gold Medal at Ottawa and Montreal.

They combine Conformation and Production.

Bull and Heifer Calves from our farms for sale.

H. HARWOOD, Prop. B. BODEN, Man. & Ont.

FOR SALE

Netherland Beauty's Turkey Boy, pure bred Holstein bull, born March 28, 1911. Dam Netherland Beauty De Kol, 6067, 2nd year, on official test, gave 422.46 lbs. milk and 25.85 lbs. butter in 7 days. Average test, 4.27 per cent; best three successive weeks, milk 197.27, testing 4.25 per cent fat. This compares favorably with the record of the same sire in the Star Dairy Show, 1911, of 184.15 lbs. milk, testing 4.2. His sire is Gano's Favorit 100, born 1888, gave 425.5 lbs. milk and 30.15 lbs. butter in 7 days. His dam, Favorit 58, gave 550 lbs. milk and 35 lbs. butter in 7 days. This bull is beautifully marked and in prime condition, and will be shipped to any white and will be garrisoned to any white.

W. H. CHERRY, GARNET, ONT.

feet. The barns are all of modern design and well lighted. In the horse barn, which is a fine building in which to exercise and exhibit the horse.

Already an excellent start has been made in pure bred stock. Holsteins, Clydesdales and hackneys are being kept. It is this firm that bought the champion Holstein cow May Echo at the recent Belleville sale for \$14,000. Since the sale, May Echo has dropped a bull calf. She has been doing excellent work, giving 70 lbs. of milk per day on an average.

Another noted animal in the herd is Netherby Queen Jane, which has given 155.5 lbs. of milk in 7 days, and 25.5 lbs. of butter. During 7 days she produced 748 lbs. of milk or an average of almost 107 lbs. a day, and at that she was not in the best of condition. This animal was purchased from Mr. Sidney Carlyle, of Chesterville.

The horses include nine hackneys, among this number being four stallions. There are 20 Clydesdales, including four stallions. Several of these animals have been imported from England. At the time of our editor's visit Mr. Percy Allison was planning to leave that night to attend a large sale of Holsteins at Syracuse, N.Y. The firm has recently purchased from H. A. Moyer, of Syracuse, a magnificent young bull, that is possibly the most richly bred, from a milk producing standpoint, of any bull in Canada. This magnificent young bull, that is possibly the most richly bred, from a milk producing standpoint, of any bull in Canada. This magnificent young bull, that is possibly the most richly bred, from a milk producing standpoint, of any bull in Canada.

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REPORT OF OFFICIAL TESTS FOR HOLSTEIN-FRIESIANS FOR 1911.

Netherby Queen Jane (4356), at 8 years, 9 months, 1 day of age; 22.85 lbs. fat, equivalent to 27.50 lbs. butter; 562.4 lbs. milk. Owned by H. J. Allison, Chesterville, Ont.

Clara Mercedes Dekol (5005), at 6 years, 11 months, 5 days of age; 22.00 lbs. fat, equivalent to 27.50 lbs. butter; 586.4 lbs. milk.

Forty-four-day test, at 6 years, 11 months, 5 days of age; 43.14 lbs. fat, equivalent to 53.92 lbs. butter; 1156.2 lbs. milk. Owned by Holbert Jerome, Glanford, Ont.

Holly Echo Dekol (6284), at 6 years, 0 months, 21 days of age; 30.6 lbs. fat, equivalent to 37.77 lbs. butter; owned by J. C. Carter, Man. & Ont.

Canary Triton Jewel (7387), at 7 years, 6 months, 15 days of age; 20.25 lbs. fat, equivalent to 25.28 lbs. butter; 537.8 lbs. milk.

Thirty-day test, at 7 years, 6 months, 15 days of age; 81.30 lbs. fat, equivalent to 101.59 lbs. butter; 2,311.8 lbs. milk. Owned by T. L. Dunkin, Norwich, Ont.

Canary Butter Girl (6512), at 5 years, 10 months, 20 days of age; 18.85 lbs. fat, equivalent to 23.57 lbs. butter; 484.6 lbs. milk. Owned by Jas. Rettie, Norwich, Ont.

Trionia Mercedes Queen (5026), at 9 years, 3 months, 30 days of age; 37.53 lbs. fat, equivalent to 46.91 lbs. butter; 1,045.5 lbs. milk. Owned by P. J. Salley, Lachine Rapids, Que.

Lady Hanks (5989), at 6 years, 11 months, 7 days of age; 16.18 lbs. fat, equivalent to 21.17 lbs. butter; 416.8 lbs. milk. Owned by A. E. Hulet, Norwich, Ont.

Belva Sylvia 414 (4911), at 5 years, 9 months, 5 days of age; 16.91 lbs. fat, equivalent to 21.15 lbs. butter; 490.1 lbs. milk.

Thirty-day test, at 5 years, 9 months, 5 days of age; 70.51 lbs. fat, equivalent to 88.14 lbs. butter; 1,913.1 lbs. milk. Owned by W. H. Cherry, Garnet, Ont.

Winnie R. Calamity Posch (7221), at 5 years, 4 months, 24 days of age; 16.30 lbs. fat, equivalent to 21.12 lbs. butter; 465.4 lbs. milk. Owned by P. J. Salley, Lachine Rapids, Que.

Forty-four-day test, at 5 years, 4 months, 24 days of age; 33 lbs. fat, equivalent to 41.25 lbs. butter; 927 lbs. milk. Owned by Lakeview Farm, Bronte, Ont.

Grechen Abbecker Dekol (4477), at 6 years, 3 months, 23 days of age; 16.87 lbs. fat, equivalent to 21.09 lbs. butter; 317.4 lbs. milk. Owned by A. C. Hardy, Bronte, Ont.

Charlie Dekol (5070), at 6 years, 1 month, 6 days of age; 16.08 lbs. fat, equivalent to 20.10 lbs. butter; 563.5 lbs. milk. Owned by Edwin C. Chambers, Fairfield Plain, Ont.

Cynthia Ann (7331), at 10 years, 4 months, 14 days of age; 15.63 lbs. fat, equivalent to 19.87 lbs. butter; 428.4 lbs. milk. Owned by T. L. Dunkin, Norwich, Ont.

Poach Inka Sylvia (5942), at 6 years, 2 months, 10 days of age; 15.67 lbs. fat, equivalent to 19.45 lbs. butter; 452.8 lbs. milk. Owned by Lakeview Farm, Bronte, Ont.

Hidcau Bell (6624), at 5 years, 9 months, 17 days of age; 15.43 lbs. fat, equivalent to 19.29 lbs. butter; 412.2 lbs. milk. Owned by C. J. Coon, Athens, Ont.

Bel Tensen Helena (7230), at 5 years, 4 months, 7 days of age; 15.74 lbs. fat, equivalent to 19.17 lbs. butter; 441.6 lbs. milk. Owned by Lakeview Farm, Bronte, Ont.

Thirty-day test, at 5 years, 4 months, 7 days of age; 62.42 lbs. fat, equivalent to 78.03 lbs. butter; 1,965 lbs. milk. Owned by Lakeview Farm, Bronte, Ont.

Olive Abbecker Posch 2nd (5623), at 6 years, 11 months, 24 days of age; 14.69 lbs. fat, equivalent to 18.25 lbs. butter; 458.7 lbs. milk. Owned by Elias Snyder, Burgessville, Ont.

Petty Fida (6490), at 5 years, 5 months, 16 days of age; 14.60 lbs. fat, equivalent to 18.35 lbs. butter; 465.85 lbs. milk. Owned by H. Hicks, Newtonbrook, Ont.

Fafrist 10th (5816), at 10 years, 0 months, 6 days of age; 14.43 lbs. fat, equivalent to 18.04 lbs. butter; 485.57 lbs. milk. Owned by F. Hicks, Newtonbrook, Ont.

Speckle Abbecker Dekol (5147), at 7 years, 4 months, 7 days of age; 14.43 lbs. fat, equivalent to 18.03 lbs. butter; 485.57 lbs. milk. Owned by G. E. Sherwood, Brockville, Ont.

Id Abbecker 2nd (4974), at 7 years, 4 months, 5 days of age; 14.24 lbs. fat, equivalent to 17.81 lbs. butter; 503.8 lbs. milk. Owned by H. Bollett, Cassel, Ont.

Howie Pirateng De Kol (4888), at 7 years, 8 months, 8 days of age; 14.07 lbs. fat, equivalent to 17.58 lbs. butter; 444 lbs. milk. Owned by T. L. Dunkin, Norwich, Ont.

Miss Kent Dekol (5230), at 6 years, 10 months, 21 days of age; 14.06 lbs. fat, equivalent to 17.58 lbs. butter; 460.44 lbs. milk. Owned by A. A. Johnson, Stratfordville, Ont.

Jewel of Shady Creek (2977), at 11 years, 0 months, 18 days of age; 13.59 lbs. fat, equivalent to 16.99 lbs. butter; 426.0 lbs. milk. Owned by Holbert Jerome, Glanford, Ont.

Bella Maud (5637), at 6 years, 0 months, 27 days of age; 13.13 lbs. fat, equivalent to 16.43 lbs. butter; 404.5 lbs. milk. Owned by Edwin C. Chambers, Fairfield Plains, Ont.

Cora Countess Echo (9120), at 4 years, 2 months, 7 days of age; 16.04 lbs. fat, equivalent to 20.05 lbs. butter; 392.09 lbs. milk. Owned by Smith & Dryden, Dundas, Ont.

Queen Wilhelmina (8913), at 4 years, 1 month, 10 days of age; 15.82 lbs. fat, equivalent to 19.87 lbs. butter; 516.2 lbs. milk. Owned by W. J. Bailey, Nober, Ont.

Queen Inka Dekol (8987), at 4 years, 0 months, 16 days of age; 15.43 lbs. fat, equivalent to 19.29 lbs. butter; 484.4 lbs. milk.

Thirty-day test, at 4 years, 0 months, 16 days of age; 63.65 lbs. fat, equivalent to 79.53 lbs. butter; 1,956 lbs. milk. Owned by Lakeview Farm, Bronte, Ont.

Tidy Mercedes Canary (8420), at 4 years, 4 months, 15 days of age; 14.41 lbs. fat, equivalent to 18.04 lbs. butter; 366.1 lbs. milk. Owned by T. L. Dunkin, Norwich, Ont.

Annie's Bonnie Lassie (8419), at 4 years, 5 months, 8 days of age; 14.21 lbs. fat, equivalent to 17.17 lbs. butter; 423.5 lbs. milk.

Thirty-day test, at 4 years, 5 months, 8 days of age; 55.8 lbs. fat, equivalent to 69.75 lbs. butter; 1,753.9 lbs. milk. Owned by T. L. Dunkin, Norwich, Ont.

Daisy Isabelle (10080), at 4 years, 2 months, 2 days of age; 13.56 lbs. fat, equivalent to 16.96 lbs. butter; 407.8 lbs. milk. Owned by Thomas Goodson, Manhard, Ont.

Dione Korndyke (11215), at 4 years, 11 months, 22 days of age; 13.21 lbs. fat, equivalent to 16.51 lbs. butter; 430.3 lbs. milk.

Thirty-day test (11215), at 4 years, 11 months, 22 days of age; 51.76 lbs. fat, equivalent to 64.45 lbs. butter; 1,735.7 lbs. milk. Owned by Lakeview Farm, Bronte, Ont.

Lottie A. DeKol (7909), at 4 years, 5 months, 23 days of age; 13.92 lbs. fat, equivalent to 17.35 lbs. butter; 428.8 lbs. milk. Owned by G. A. Brethen, Norwich, Ont.

Jewel Gerben's Star (8093), at 4 years, 9 months, 9 days of age; 12.02 lbs. fat, equivalent to 15.03 lbs. butter; 327.6 lbs. milk. Owned by T. L. Dunkin, Norwich, Ont.

HOLSTEINS

WOODCREST HOLSTEINS

A few choice Bull Calves for sale; six to ten months old. Sons of Champion Gird De Kol Saracenic Lad, and grandsons of Pledge and Saracenic of Pledge.

22nd. Recently tuberculin tested by a T. S. Inspector. Write for pedigrees and prices.

WOODCREST FARM

RIFTON, ULSTER CO., - - NEW YORK

Lyndale Holsteins

Offers two young bulls born September 1910, one of them from a tested daughter of Brightest Canary and sired by a son of a 20.38 lb. yearling daughter of Hengerfeld De Kol.

BROWN BROS., - - LYON, ONT.

HOLSTEINS

If you are wanting HOLSTEINS, any age, either sex, write:

GORDON H. MANHARD, Manhard, Ont.

RIVERVIEW HERD

Offers bull ready for service. Sire, a son of King of the Pontiac; dam, a daughter of King Beggs with over 22 lbs. butter at 3 years and 3 months.

P. J. SALLEY, LACHINE RAPIDS, QUE.

LAKEVIEW HOLSTEINS

Three bulls fit for service and several bull calves. All sired by Count Hengerfeld Payne De Kol, most of them from A. D. dam which record up to 24 lbs. butter in 7 days. Write for descriptive catalogue.

E. F. OSLER, BRONTE Telephone

HOLSTEIN CATTLE

THE MOST PROFITABLE BLOOD FREE

Illustrated Descriptive Booklets FREE

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P. O. HOUGHTON, SECT. BOX 149, BRATTLESDOWN, VT.

MOTHER'S HOLSTEINS have won 10 First, 15 Second, 8 Third and 2 First for Herd's under expert judge. We have of course bull calves for sale.

JAMES MOTHERAL, WOLVERTON, ONT.
DRUMBO STATION

GLENSPRINGS OFFERS

Some of our best bred bull calves two to 10 weeks old. Every one from an officially tested dam. Color markings to suit every taste. Those that wish Hengerfeld blood secure one of Count Gerben's sons. Those that wish Garmann blood secure one of Garmann's sons. Those that wish Poach blood secure one from Inka Sylvia Beets Poach. Prices moderate.

E. B. MALLORY, HASKARD, ONT.

FAIRVIEW FARMS HERD

—HAS FOR SALE—

Sons of Pontiac Korndyke, sire of the (world's) record cow Pontiac Clothilde De Kol 2nd, 37.20 lbs. butter in 7 days. He is the sire of seven daughters whose 7 day test averages are 21.15 lbs. each, unqualified by the daughters of any other sire of the breed living or dead. He is the sire of the equivalent to 16.5 lbs. of the breed to sire a 30 lb. daughter.

We also offer sons of Rag Apple Korndyke, whose dam Pontiac Rag Apple, is a full sister to Pontiac Clothilde De Kol 2nd. (world's) record cow. This young sire is a son of dam and her full sister 7 day records that average for the two 54.4 lbs. milk.

We have in service, and can offer you some of Sir John's Colantha Glad, a son of the highest record daughter of Hengerfeld De Kol, 14 A.O. daughters, four over 20 lbs. each. This young sire is a son of Colantha Johanna Lad, whose 25 day test average is 23.25 lbs. and a 7 day record of 35.22 lbs. making his dam and sire's dam average 35.63 lbs. each, which is higher than that of any other sire of the breed. Let me send you breeding and quote price on any other sire of the breed.

E. H. DOLLAR, HEUVELTON, Ont.

ST LAWRENCE CO., N.Y.
Near Prescott, Ont.

