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NUMBER 50

FARM AND DAIRY

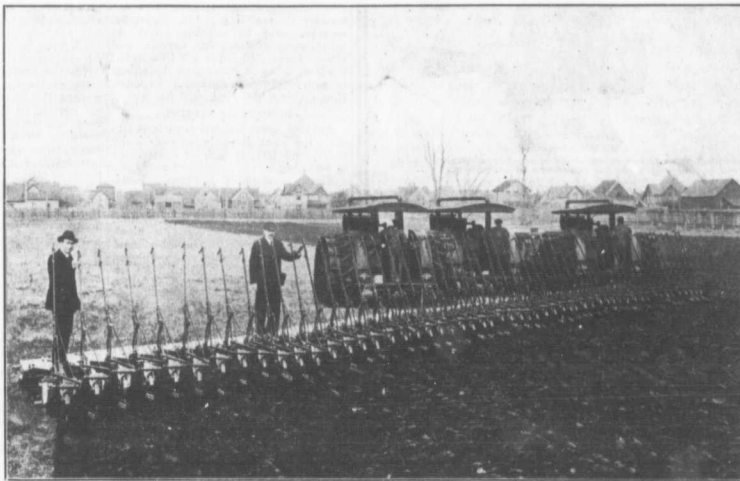
AND

RURAL HOME

PETERBORO, ONT.

DECEMBER 14

1911.



AN AGRICULTURAL WONDER—ONE OF THE WONDERS OF THE AGE.

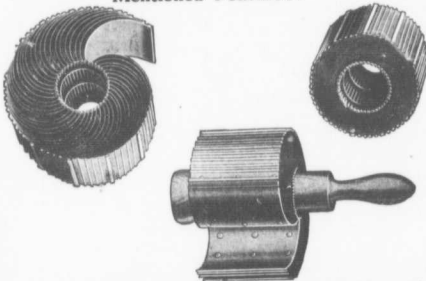
It seems almost unbelievable that it is possible to manufacture a plow, or series of plows, that will cut a slice 64 feet 2 inches in width. Yet such a plow is now an accomplished fact. The illustration above shows this plow as it was at work in South Bend, Ind., a few weeks ago. It is by far the largest plow ever built, it having 55 individual plows, each cutting 14 inches. It is a sectional plow and will adapt itself to any inequalities in the land, such as hills and hollows. Three gasoline tractors are used to haul the plow. This plow is now being made in Hamilton, Ont., for the western trade, at the new Oliver Plow Works—one of the largest and most modern factories in Canada.

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Adv. Dept., FARM AND DAIRY, Peterboro, Ont.

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

Our Mistakes in Breeding

B. H. Landels, B. S. A., N. S. Agr. College

One of the most common and most obvious mistakes in breeding that we are making in Nova Scotia is the use of the "scrub" sire, because he is a good individual and the other extreme, that of the weakling pure bred because of his pedigree. These mistakes are in the same class; the one as short-sighted as the other. Our government could well afford to consider this matter with intent to prohibit even the keeping of such animals, because if kept they will be used. France has demonstrated the possibilities of governmental control of breeding sires.

The next mistake is in the choice of breeds for a given purpose. The differences in breeds adapt them for different conditions and expenses. For instance, the Berkshire hog does not produce the highest class bacon, neither do Holstein cattle utilize rough pasture lands to as good advantage as Ayrshires. Our province, small as it is, has within it many differing conditions. Yet our farmers continually make the mistake of choosing their breed without considering conditions at all. The general result is expensive production, often of poor quality, and degenerating stock. Or the breeder, realizing his mistake, switches over to another breed, at great waste of time and expense, and often, worse still, uses his ill-adapted stock as a basis for future breeding, in order to save present expense, thus making his climb still harder.

CONSISTENCY LACKING

Another error we make, so broad in its scope that it includes practically everything left, is lack of consistency in breeding.

First, consistency in type. Possibly no two breeders quite agree on single type firmly fixed in his mind, or so constantly changes his ideal. More dangerous still, because more insidious, are the methods employed to reach an ideal once fixed. An individual, possessing some good characteristic in marked degree, is selected and used. The next sire to be used may be, perhaps, equally desirable, but from the standpoint of a different characteristic altogether, the special feature of the first being rather weak in the second, the breeder losing sight of the fact that gain in one respect is offset by loss in another.

Great breeders have apparently followed this method at times, but careful study and keen insight into the art and science of breeding are necessary if any measure of success is to be secured except by a rare, lucky accident. Success in breeding for better stock can only be assured by guarding carefully against the loss in any degree of a single desirable characteristic, even if other desirable features are added more slowly.

STAY WITH ONE BREED

Secondly, consistency in the breed. Having desirable type in mind and breed chosen, "stay with it." Failure here is all too common, especially among agricultural societies where sires, first of one breed then of another, are purchased in order to satisfy the demands of the several members. Thus the intermixture runs on, any progress that is made with one sire being promptly lost with the next.

Thirdly—consistency in progress itself. One of the most common mistakes of all, especially when grading, is to follow the use of a good sire with the use of one of somewhat inferior quality. Better by far to reverse the order if the inferior animal is to be used at all. Then, if his use has raised the quality of the offspring above that of their dams, the better sire will have that much higher class material to work upon. The

other always constitutes a step in the wrong direction.

These are a few of the outstanding mistakes we have made and are still making in our province. Our mistakes cannot be considered peculiar to ourselves. They are not unique in any way. They are made in every province of Canada. Could they be corrected, the nation of the agricultural world would soon be drawn toward the live stock of the "Bluenose" province.

Comments on the Draft Horses

Geo. P. Grout, Minnesota

The breeding of draft horses has come to be a very profitable adjunct to diversified farming, and at no time during the past 15 or 20 years has the price been higher for good draft and heavy farm horses. While the automobile may, to a certain extent, have displaced the horse for city delivery, still the bulk of the farm work is done with horses and good stock of draft and heavy farm horses are bringing good prices. There is little reason why the farmer should not continue to raise horses of this kind, since brood-mares—and stallions, too, for that matter—will produce stronger and better ones for having been kept steadily at work on the farm.

On the home farm we have raised some of the cleanest, best colts, and worked the mares right along. There are certain conditions under which it does not seem practical to put the breeding stock into harness, but as many farms these conditions are not met. Where a farmer must rely almost wholly on hired help to drive his teams, it may not be practicable to put pure-bred stock into harness. If the farm boy shows an interest in horses, raise some good drafters. Put a good harness on them, and let the boy do his team work, and there will be no question about the care they will get. You will find the boy after a day's work, out cursing off the horses, making sure they are comfortable. I speak from experience and know that when these horses are offered for sale they will bring a good price.

Horse Wisdom

Don't let the horse stand unblanketed while you gossip with your neighbor. Throw the rug over him, and then he will enjoy the conversation as much as you do.

There is lots of wisdom in that part of the horse, "Up the hill drive me not, down the hill force me not, at the level spare me not." It takes a lot of energy to carry a load uphill and a trot. Forcing a horse down a hill at a break-neck speed accounts for defective knees, bad gait and a weak neck in many horses.

Where several colts are wintered it is well to separate them into groups according to size, otherwise the older ones will get all the good things that are going.

Items of Interest

The Nova Scotia Agricultural College has a bull calf that establishes a world's record for weight. This bull weighed when born 145 lbs. 14 oz. The dam of the calf, "College Fawn," weighed at birth 136 lbs.

All live stock farmers should receive a copy of a bulletin recently issued by the Live Stock Commission of Ottawa on "The Commercial Bull." It gives a plain concise description of the disease itself, how it spreads among cattle and methods of suppression. The bulletin is written in a plain, simple manner that will be understood by all.

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Each Week

FARM AND DAIRY

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a Year

Vol. XXX.

FOR WEEK ENDING DECEMBER 14, 1911

No. 50

WHAT IS THE JUST METHOD OF PAYING FOR MILK AT CHEESE FACTORIES?*

Professor H. H. Dean, O.A.C., Guelph, Ont.

Both Fat and Casein in Milk Should be Considered in Testing as both Enter into the Composition of Cheese. The Fat Plus Two Standard is Approximately Correct as Determined by Recent Experimental Work.

THE money received by the farmer, who furnishes milk to a cheese factory, is hard-earned money. It represents the interest on capital invested in farm land, live stock, buildings, fences, feed, etc., and pay for the labor spent upon the cow, feeding, milking and caring for her. Money earned, is money appreciated at its worth, and no class of men ought to, and do, appreciate the value of money like the farmers, who are the most poorly paid of any class in Canada, considering capital invested and labor spent upon the production and marketing of their produce. It is not my intention to argue this point at present, but shall proceed at once to discuss the subject under consideration.

"Nothing is settled, until it is settled right."

The basis of settlement among patrons of cheese factories, after paying for the cost of manufacturing, selling and other legitimate expenses, must include the following points: 1. It must be fair and just to all concerned. 2. It should be inexpensive. 3. It must be applicable to factory conditions and suit the needs of the people. 4. It must be supported by a majority of the patrons.

The "average" man moves along the line of least resistance, or moves not at all. Inertia is a common characteristic of all kinds of matter both living and dead, hence any system to be popular, which will appeal to the "man on the street," or to the man plowing his lonely furrow on the farm, must take into account, this common property of humanity, inertia or inactivity, the "let well enough alone policy," which is nearly always popular. The man who asks for the hard and difficult things of life is rare. Most commonly he says, "Show me the old paths."

It is because of the foregoing reasons that in the cheese factories of Canada we have had for so many years, and continue to have, the system of dividing money among patrons known as the "pooling

A paper read last week at the Conference of Dairy Experts from all parts of Canada, held under the direction of the Dominion Department of Agriculture. The reading of this paper started a discussion, as a satisfactory basis of paying for milk by test in connection with our cheese factories would be agreed upon. This result was not attained, as while it was agreed that the pooling of milk and the paying for it by weight was the most uniform system of any that are followed, the conference voted down a resolution endorsing both the straight fat test and the fat-plus-two test. This latter advocated by Professor Dean, the opinion of the meeting being that to endorse both these systems would tend to cause confusion and friction among patrons.

plan," or dividing according to the weight of milk delivered. The basis or principle of this system is that all milk is of equal value per 100 lbs., for the purpose of making cheese. It assumes that all milks are of similar composition as it is drawn from the cow, and that all those handling the milk are strictly honest, and will neither add to, nor take from, the milk anything whatsoever, except heat.

The arguments commonly advanced in favor of this plan are, it is easy to apply, it is cheap, and it is "good enough for us." It is popular because it is easy and cheap. Against this system it may be urged that it is not fair and just, because milk varies a great deal in its cheese making capacity. For instance, milk testing three per cent. fat requires over 11 lbs. of milk to make

was accorded an enthusiastic reception by most scientific dairymen, and with a fair measure of approval by farmers and cheese makers.

The arguments advanced in favor of this system were: The fat is the most valuable part of milk; the yield of cheese is in fair accord with the fat content of the milk; the testing of milk for fat can be applied to factory conditions, especially with the advent of the composite method of sampling, and the introduction of large steam turbine machines.

Against the "fat" plan it has been urged that the Babcock tester is not accurate; that the cheese maker who does the testing may have favorites among the patrons and manipulate the test in their favor, or against those whom he does not like; that it costs too much to test the milk, and that the fat is not an exact measure of the relative cheese value of milk.

IT DOESN'T STAND THE TEST

In connection with the last objection, we may be allowed to quote briefly the results of some experiments conducted at the O. A. College:

Milk Testing	Produced lbs. 100 lbs. Milk	Cheese per 100 lbs. Fat in Milk
3 Fat	8.80	5.92
3.5 "	9.54	5.76
4 "	10.38	5.57
4.5 "	11.26	5.47
5 "	11.77	5.36

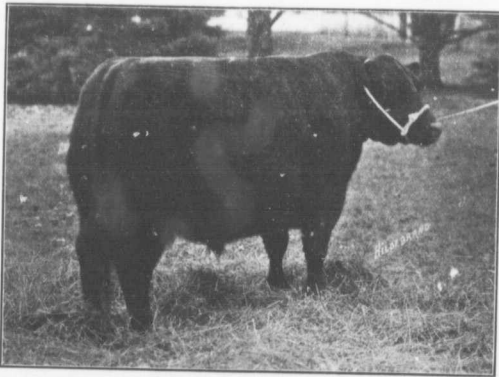
The results indicate an increased yield of cheese per 100 lbs. milk, but a decrease in the yield of cheese per pound of fat in the milk, as the percentage of fat in the milk increased. Or, stated another way, as the percentage of fat in the milk decreased from five to three there was an increase in the yield of cheese per pound of fat in the milk, but a decrease in the pounds of cheese made per 100 lbs. of milk.

This would lead us to conclude that some other factor or factors than milk-fat, determine the yield of cheese in milk. What these factors are, it may not be possible to determine in their entirety, but there is at least one other factor which we know has a marked effect upon cheese and cheese yield, namely, the casein of milk. Without casein it is impossible to make cheese. It is, too, the constituent

which makes cheese so valuable as a food, as it is the nitrogenous or muscle forming part of milk and cheese, which is the most valuable and most expensive part of a food to produce.

Milk-fat is produced from elements which come from air and water and cost the farmer practically nothing in the form of soil fertility, whereas the nitrogen of the casein, and the ash constituents of the milk, which also enter into the composition of cheese, are the most expensive to produce on the farm, and are the most valuable to the consumer. It would seem that this valuable and expensive food compound in milk and cheese

(Continued on page 6)



A Sensational Winner That Sold at a Record Price

"Victor," the grade Angus steer, grand champion at the recent International Live Stock Show, Chicago, is here shown. This animal affords one of the best studies in beef type that can be obtained. Note the wonderful depth, the smoothness and the low-setness of this animal. He sold at auction for 90 cents a lb. live weight after winning his premier laurels.

one pound of cheese, whereas, milk testing four per cent. fat will require, on an average, about nine and a half pounds of milk to make a pound of cheese. Also this plan is a temptation to the "weak brother" to add water or skim-milk, or remove the cream for the coffee's sake.

THE "FAT SYSTEM" INTRODUCED

The second system, introduced about 1890, at the advent of the Babcock test for milk-fat, is known as "payment by test," "the relative value plan," "the fat system," and by other names. The basis or principle of this test is that all normal milk for cheese making is valuable, in proportion to the milk fat which it contains. This plan

IT IS NO WONDER THAT BOYS LEAVE THE FARM

LAST week, in the discussion of this subject, the statement was made that the real reason why boys leave the farm is because farming on the average, does not offer as great opportunities as may be obtained in other lines of endeavor. This week we will go one step further and state that **farming does not on the average yield the returns that it should. This is proven by the fact that more farmers on the average making more money than people in other lines of work there would immediately be a rush from the cities to the farms.**

Note that we say "farming on the average." We are perfectly well aware that some farmers are making money. This, for many people, beclouds the whole issue. Because some farmers make money they conclude that all farmers might if they tried. They then proceed to berate the farmer for his lack of thrift, his lack of intelligence, his neglect to adopt modern, scientific methods of farm management, and for numerous other sins of omission and commission. In this campaign leading government officials have played a prominent part. The daily papers, taking their cue from them, have followed in their train: Periodically they devote columns of space to showing what fools the farmers are. Generally they conclude by adopting a patronizing attitude and asserting that the poor farmer needs to be helped by giving him more money to spend on his country roads, on his rural schools and in educating him generally. Our country boys read and hear these things. Naturally, if they have any manhood in them, they resent them, and only too often they eventually reach the conclusion that they will abandon a calling that is looked down upon, pitied and patronized by large and influential classes of citizens.

The people who criticize and patronize the farmer do not realize the fact that almost without exception the farmers who are making money are located on naturally productive land that is favorably situated as regards convenience to markets. A far larger proportion of our farmers are working land that for the most part is only fairly good. These men, and their wives as well, when they make ends meet, do so only by exercising the utmost frugality. This necessitates their forfeiting many comforts and involves constant, exacting physical labor that places a steady strain on mind and body. Many farmers in spite of their best endeavors, fail to make ends meet and steadily go behind. Many ultimately give up the unequal struggle. These either move into new districts, such as the west, or flock into the cities, seeking such work as they can find.

The foregoing facts are patent to all who care to investigate them. Ex-President Roosevelt realized something of the critical position of scores of thousands of the farmers of the United States when a few years ago he appointed a commission on country life. This commission was instructed to investigate these conditions. In his letter transmitting the report of this commission to the Senate and House of Representatives of the United States, President Roosevelt, under date of February 9, 1909, said in part: "Farming does not yield either the profit or the satisfaction that it ought to yield and may be made to yield."

The members of the Country Life Commission, after investigating conditions thoroughly, made this statement in their report: "Agriculture is not commercially as profitable as it is entitled to be for the labor and energy that the farmer expends and the risks that he assumes, and that the social conditions in the open country are far short of their possibilities."

Further on in the report this statement is made: "The farming interest is not as a whole, receiving the full returns to which it is entitled, nor has country life attained to anywhere near its possibilities of attractiveness and comfort. * * No growth of cities, no growth of wealth, can make up for loss in either the number or the character of the farming population. * * The drift to poverty and degradation is pronounced in many parts of the country. In every region a certain class of the population is forced to the poor lands, becoming a handi-cap to the community and constituting a very difficult social problem."

The commission recommended that "the entire range of economic questions involved in the relation of the farmer to the accustomed methods of doing business," should be investigated by the government. Unfortunately, President Roosevelt passed out of office and this investigation has never been undertaken. It is in the interests of certain classes of the community that it never should be made.

Why is it then that when the prices of farm products are so high farming is not more profitable? It is because we no sooner make our money than it is fished from us in ways that most of us do not understand. Railways and express companies that are greatly over capitalized and under taxed charge us excessive prices for the transportation of most things that we buy and sell. Our natural resources, such as our timber lands, coal and iron mines and water powers, have been seized by private parties who exploit them for their benefit and to our loss. Combines that have been formed behind our tariff walls have put up the prices of almost everything we buy, and thus we are bled while buying the things that we need and must have. We, by our productive labor, build up towns and cities and thus create millions and millions of dollars of wealth in land values that we do not see and which—as explained in our last two issues—is taken by other people, who thus reap what they do not sow.

For much of this we are to blame ourselves. We have allowed the interests that are in control of our political parties to divide us on party lines. Thus we never have the privilege of discussing these things among ourselves, and where we will be free from political influence. Fortunately, this is no longer the position of the farmers in Western Canada. There they have organized, and are thinking and acting for themselves. The sooner the farmers in Ontario and the east follow the example that they have been set by the farmers of the west the sooner will the farmers of Canada, as a whole, come into their own.

Pointers on Brood Sows

D. A. Gauvin, University of Minnesota

For 24 or 36 hours after farrowing, the sow need be fed nothing save some warm water, to which a small quantity of shorts has been added. This will have a tendency to hold back the milk flow, relieve the congested condition of the udder, and check the frequent tendency to fever. After 36 hours, the feed may be gradually increased to about one pound of the grain feeds mentioned, a cub. a day. A plan that has worked well has been to feed the sow as follows:

For the first two weeks after feeding is begun, feed from one to one and a quarter lbs. of feed a cub. of sow daily. Two weeks after farrowing, and until the pigs are weaned, allow the sow for maintenance about one pound of feed a cub. of sow a day. For each pig during the third week, feed 3 lbs. additional; for the fourth week, 6; for the fifth week, 8; for the sixth week, one

Two Generous Donations

The committee of management in charge of the interprovincial prize dairy farms competition being held this year in Ontario and western Quebec, and which will be continued next year, desire to acknowledge their thanks for the receipt of two letters, one from Mr. E. G. Henderson, of the Canadian Salt Co., Windsor, Ont., and the other from Mr. H. C. Sparling, the managing director of the Empire Cream Separator Company, of Canada, Limited, whose head office is in Toronto, donating \$200 each to the funds of the competition. Both Mr. Henderson and the Empire Cream Separator Co. made similar contributions to the prize farms contest held throughout Ontario during 1909 and 1910. Both are firm believers in the good accomplished by such competitions.

In the letter received from Mr. Sparling appeared the following comment upon the competitions: "We believe that the usefulness of this kind of competition is so great that it should be kept up for years to come. They cannot help but raise the standard of dairy farms in this country. The reports of the judges and the descriptions of the prize-winning farms, in the last two competitions, that have appeared in Farm and Dairy, giving details about their management have been, we believe, of very great instructional value to Ontario farmers. In order to indicate our interest in the dairy farms of the province and to do what we can towards raising their standard, we take pleasure in making this contribution."

pound; and for the seventh and remaining weeks, from one to 1.15 lbs. In addition to this feed, give the sow plenty of pasture and exercise. Sunlight and exercise keep the sow and her pigs in good tone and help to correct a great deal of the feeding trouble of which we hear so much complaint.

In winter the sow should be comfortably housed, preferably in a cot well supplied with straw, and placed some distance from her feeding place, so that she will get necessary exercise in running to and fro. Her feed should consist largely of bulky foods, such as milk, roots and clover hay, which will keep her in good condition without fattening.

If food supplies are abundant and cheap; and if good shelter is plentiful, there is no reason why two litters of pigs should not be produced from the same sow during each year of her usefulness. But if there is a scarcity of any essential cheap or otherwise wasted feeds, either roots, milk grain in droppings of cattle, or cheap grain, it is better that the pork-producer's efforts should be directed to the perfect growing of a single litter.

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Bovine Tuberculosis a Great Menace

Few of us realize how serious a menace is bovine tuberculosis. The United States Department of Agriculture estimates that 10 per cent of the dairy cattle in that country are afflicted with tuberculosis. Dr. Rutherford states that in Canada the percentage of affected animals is just as large.

The health officials of our cities are coming to realize what a danger these diseased cows are to the health of the community. In several cities of the United States regulations have been passed requiring that all herds supplying those cities with milk shall be tested and free from tuberculosis. The sentiment in favor of this seemingly stringent legislation is constantly growing, and Canadian cities will soon be taking similar steps to safeguard the health of their citizens. Then we dairy farmers will regret that we did not take hold of this disease sooner.

A PRODUCT OF OUR METHODS

Tuberculosis in cattle is a product of the artificial conditions under which they live. Close, poorly ventilated stables make an ideal condition for the development of the disease. These conditions are also ideal for the spreading of this disease from one cow to another. Hence it is that under present conditions tuberculosis is so rapidly gaining ground.

The first point in dealing with the disease is, of course, to have our herds tested. Apparently, thrifty and healthy herds have been found to be badly infected. We need not longer regard the tuberculin test as unsafe. Dr. Rutherford and other veterinarians believe that when properly applied its indications are correct in 99 out of 100 cases. Where there are only two or three cows in a herd infected, we believe it is best to get rid of them immediately and then disinfect the stables.

GOOD VENTILATION OF FIRST IMPORTANCE

The next point is to remove the conditions that are favorable to the growth of tuberculosis. The first consideration should be good ventilation; some adequate method of removing the foul air in the stable and replacing it by pure air without causing drafts. Either the King or Rutherford systems of ventilation will accomplish

this object. The next point is to have the stable light and clean, and, lastly, we should test the herd regularly and keep it absolutely free from infected cows.

We farmers have not been as alarmed at the inroads of this disease as we should be. The very fact that a cow may have the disease for years without showing external effects causes us

Xmas Gifts of Lasting Value

Wouldn't you rather have a year's subscription to a good farm paper like *Farm and Dairy* than most of the presents that you receive? Well, most of your friends feel just as you do.

In order to help you make your Christmas money go round we are making a special Christmas gift offer, the full particulars of which you will see on the back page of *Farm and Dairy* this week.

There is no other gift, which, at an equal expenditure, will bring so much profit and pleasure to your friends who are interested in farming during 1912 as will a gift subscription to *Farm and Dairy*.

Each Christmas gift subscription will be announced to the recipient by means of an attractive Christmas card announcing the gift and giver, which card, along with a copy of the current issue of *Farm and Dairy*, will be mailed to arrive on Christmas morning.

In order to be in time it will be well for you to just sit down now and make out a list of those to whom you want to send *Farm and Dairy* for a year as a Christmas present. Mail a money order or cheque to us to cover the cost as per our special announcement, page 20, this week, and we'll attend to the rest—you needn't even write to your friends.

to regard it lightly. But in the long run it means depleted vitality, inability to produce milk in large quantities, and is a constant menace to the health of our own families and to others who consume the milk that we produce. We have got our own eyes open to the danger since several of our own cows have been condemned, and a fine herd of pure bred dairy cattle near by slaughtered because of this disease.—"Milk Producer."

Sheep Quarters and Winter Feeding

J. R. Westlake, Carleton Co., Ont.

Profit in sheep depends to a great extent in keeping expenses down. When sheep are housed and fed in the most economical manner, they are the most profitable animals on the farm. I believe that we can produce one pound of mutton cheaper than one pound of any other meat, not excepting pork.

Sheep are content with the cheapest kind of winter quarters. Our sheep house is a shed made of lumber running up and down with battens over the cracks. The door to the south side is always open, and they can come in and go out at will. Our house is located on a well-drained piece of land along with the other buildings, and they are always well supplied with clean straw. Dryness is the main essential. Warmth is no consideration. The sheep has a natural covering that is warmer than any stable we can build for it.

Our standbys in winter feeding are clover hay and turnips. We have fed pea straw, but with this for roughage, the breeding ewes require about one-half pound of grain each per day. We have had no experience with silage.

As lambing time approaches we start to feed the ewes a little ground oats and bran. We have found that alfalfa hay fed about this time does away with the necessity of grain feeding.

The point we wish to emphasize strongly is that the feed must be cheap. The great bulk of it must be grown on the farm, otherwise the profit that we make on our flock would be turned into losses.

Weeds should not be allowed to continue their ravages in the grain fields. True, some of them are difficult to eradicate, but if the nature of the pest be thoroughly understood and a determined effort put forth to do the work, they surely can be subdued. When once the land has become free of weeds it can easily be kept clean, and the profit of farming will be relatively larger.—Jas. Laughland, B.S.A., Simcoe Co., Ont.



The Leading Dairy Authorities of Canada as they gathered in Ottawa last week to attend the Dominion Dairy Conference.

All the dairy provinces of Canada sent their leading dairy experts to attend the Dominion Dairy Conference in Ottawa last week. Among those who may be seen in the above illustration are: No. 1, C. W. MacDougall, Dairy Instructor, Sussex, N.B.; 2, Henry Glendinning, Manilla, Ont., President Eastern Ontario Dairymen's Association; 3, Prof. H. H. Dean, O.A.G.C., Guelph; 4, Dominion Dairy Commissioner, J. A. Ruedick, Ottawa; 5, Frank Hearn, London, Ont., Chief Dairy Instructor and Sanitary Inspector for Western Ontario and Secretary of the Western Ontario Dairymen's Association; 6, Prof. J. W. Mitchell, Agricultural College, Winnipeg, Man.; 7, G. G. Publow, Kingston, Ont., Chief Dairy Instructor and Sanitary Inspector for Eastern Ontario; 8, C. Marker, Dairy Commissioner, Calgary, Alta.; 9, Dairy Instructor F. T. Morrow, Mermad, P.E.I.; 10, C. F. Whitley, Superintendent of Cow Testing Associations, Ottawa; 11, J. D. Leclair, Inspector General for Butter, Ste. Therese, Que.; 12, J. C. Chapuis, Assistant Dairy Commissioner, St. Denis, Que.; 13, L. A. Zofel, Superintendent Dairy School, Kingston; 14, W. A. Wilson, Superintendent of Dairying, Regina, Sask.; 15, J. F. Singleton, Kingston, Ont., Assistant Chief Dairy Instructor for Eastern Ontario. Other prominent dairymen who may be noticed are Wm. Waddell, Kerwood, President of Western Ontario Dairymen's Association; G. A. Putnam, Toronto, Director of Dairy Instruction for Ontario, and Geo. H. Barr, Chief of the Dairy Division, Ottawa, Ont.

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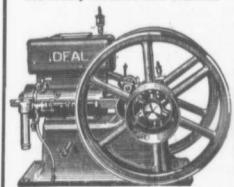
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PUBLISHER'S DESK

About Our Special Last Week

Over 67 per cent. of an increase above our corresponding issue of a year ago—that is what our Third Annual Breeders' Magazine Number of December 7 (last week) carried in advertising.

In value of advertising carried last week, we broke all our previous records. The issue is over 20 per cent. ahead of our Exhibition Number of September 1, 1910, which issue now takes second place in value of advertising carried.

This record did not merely happen. There is a reason for it.

The reason is mainly our greatly increased circulation over a year ago. (Farm and Dairy last week circulated 12,200.)

Another reason is the general feeling of confidence in Farm and Dairy that has become manifest amongst our patrons, who from the satisfactory results they have been getting through Farm and Dairy have found that it pays to advertise to the Dairy Farmers, which we reach exclusively. Then, too, the \$15,000,000 income which our people have made this year is worth while recognizing. Our patrons are in business to give good value for their share of a sum of money like this; therefore they placed their advertising with us in order that their respective propositions might meet our people face to face at this most opportune time to get next the Dairy Farmers and Christmas buyers.

Next year, beginning with our Special Poultry Number (our 4th Annual), Feb. Ist, we will have greater value than ever for our people and

for our advertisers. Our circulation will have grown a great deal more, which means that our advertising space will be worth still more to our advertisers. Then our advertisers of themselves will cause us to make new records.

Before concluding we want to tell you that Farm and Dairy will continue along the lines of our policy to publish WITHOUT FEAR OR FAVOR this paper by farmers for farmers. Come what may, our farmers' interests must ever stand first. Then our advertisers will be assured of getting full value for their advertising expenditure with us, since Farm and Dairy will continue to be "A Paper Farmers Swear by."

International Live Stock Show

Three Canadian agricultural colleges carried off the major honors in the students' judging contest at the 1911 International Live Stock Show, held at Chicago.

Macdonald College of Quebec came



Instructive Exhibit at a Country Fair

Among the most instructive features of many country fairs in Ontario now-a-days are the exhibits of the local branches of the Department of Agriculture. The exhibits here illustrated are sent to the York Co. Fair this fall. It was designed by W. E. J. Edwards, B.S.A., the District Representative in that county.

first with 4,363.55 points, Manitoba second with 4,335.5, Missouri third with 4,315 and Ontario fourth with 4,205. Iowa State College, which came first last year, was fifth this year with 4,154.5 points. The other colleges competing were Texas, Montana, Ohio, Kansas, Nebraska, with awards in the order mentioned. This is the first year Macdonald College has been in the competition and the boys, trained by Professor Barton, a graduate of O.A.C., made a name for their college and their instructor.

The individual ratings were: H. P. Williams of Missouri, first; G. H. Jones, Manitoba; G. J. Robertson, Macdonald; E. Weir, Ontario; Archie Campbell, Macdonald; P. F. Brett, Manitoba; W. Gibson, Macdonald; and W. H. Hicks, Manitoba, in order from the grand champion first in hogs and Ontario first in sheep. Macdonald's uniform good work put them at the top, although they did not win in any single class.

A CANADIAN FOR RESERVE
Very few Canadians exhibited at the show this year. No Canadian horses or swine were present. J. A. Watt of Salem, Ont., had his fine Shorthorn bull there and pulled off the Junior Championship. Mr. Watt's bull gave the grand champion King Master, owned by White and Smith, St. Cloud, Minn., a close run for the championship, but had to take second place, as it was a little weak in the back.

Quite a number of Canadian sheep breeders were present and demonstrated that Canada could breed winning sheep. At the time of writing the sheep had not all been judged.

GRAND CHAMPIONSHIP FOR CATTLE

Mr. J. Lloyd Jones of Burford, Ont., had the grand champion wether under two years old. The reserve grand championship went to University of Wisconsin. In fat Shropshire Jones got second and fourth in weth-

er lamb class and second in pen of five wether lambs.

In fat Cotswolds E. F. Park of Burford, Ont., got second in a class of wethers one year old and under two, second and third in wether lamb class and first in pen of five wether lambs.

A SCOOP ON LEICESTERS

In Leicesters Canadians carried off everything. In class of wethers one year old and under two, A. & W. Whitelaw, Guelph, Ont., got first; S. Parkinson, also of Guelph, second, and A. W. Smith, Maple Lodge, third. In wether lamb class Whitelaw got first and second, Smith third, Whitelaw got first in pen of five wether lambs and also had the champion Leicester wether.

In fat Oxford, F. T. Lee of Simcoe, Ont., got first and third and first in pen of five lambs. In fat Lincoln also Canadians carried off everything. In yearling wether class L. Parkinson got first and John Lee & Sons, Highgate, Ont., second and third. In wether lamb class Lee got first and fourth, Parkinson getting second and third, Parkinson got first on pen of five second; the grand championship went to Parkinson on a yearling.

GRAND CHAMPION IN ANGUS

The grand champion steer of the show was Victor, a grade Angus, fitted and exhibited by the Iowa State College, Nebraska College, had the reserve championship, Prince of Viewpoint 2nd, also an Angus. The grand champion was two years 10 months old and weighed 1,670 lbs. The reserve champion, two years and three months weighed 1,670 lbs. Victor was a somewhat blockier type and a little wider on top; he has a remarkably fine rump. Mr. Criddle, the judge, asserted that Victor had the best rump he ever saw on a bullock. The grand champion was sold for 90¢ a lb. live weight.

Iowa Jersey baby heaves exhibited by Escher & Ryan were the carlot grand champions. It is rather significant that in the last 12 years the Angus breed has carried off the grand championship in carlots nine times, and the individual grand championship seven times.

The show of horses and swine was remarkably good. No Canadian stock was exhibited in either class.—H.C.N.

What is the Just Method?

(Continued from page 3)

ought in some way to be recognized in an equitable and just system of dividing money among patrons from the sale of cheese.

Because of these facts, there arose a third system for a basis of settlement among those contributing milk for the manufacture of cheese. This may be called the fat-casien plan. The arguments in favor of this plan may be stated as follows:

1. The fat and casien of milk are the two chief and most valuable constituents which enter into the making of cheese.

2. The yield of cheese is fairly in accord with the fat-casien content of the milk. During the season of 1910, at the O. A. C., the extreme variation in the yield of cheese per pound of fat and casien was 1,607 lbs. of cheese in the month of June to 1,452 lbs. in October—a difference of but 155 lbs.

3. This is the fairest and most just plan yet devised because it places nearest to a measure of the cheese yielding capacity of normal milk.

The arguments against this system are:

1. The testing of both fat and casien in factory milks is too expensive, may not be accurate, and is not practicable under present factory conditions.

2. The patrons are not familiar with these tests and they prefer to go "as

(Concluded on page 9)

How Much Does it Cost By the Year?



The first price of a cream separator is no basis for figuring its cost. Suppose you paid \$2 for a pair of shoes which, with \$1.00 worth of repairs, lasted 12 months, making an average monthly cost of 25 cents. At another time, you paid \$3 at the start, only 50 cents for repairs, and the shoes lasted 24 months—an average cost of less than 15 cents per month. Which was the better buy?

The same principle holds good in cream separator buying. You may pay a low price at the start—but such a separator will need frequent repairing—and won't last. The cost per year will be double that of a good separator.

IHC Cream Harvesters Dairymaid and Bluebell

are famous for their durability. They skim close and run easy for hard, steady service. Here are some of their advantages:

Milk and dust-proof gears which are easily accessible—a feature found on no other separators; a patented dirt-arrester which

removes the finest particles of dirt before the milk is separated; frame entirely protected from wear by phosphor bronze bushings; large shafts, bushings, and bearings.

IHC Cream Harvesters are made in two styles—Dairymaid, chain drive, and Bluebell, gear drive—each in four sizes. Let the IHC local agent tell you all the facts, or, if you prefer, write nearest branch office, catalogues and any special information you desire.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Leithbridge, London, Montreal, North Bayfield, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

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IHC Service Bureau
The Bureau is a clearing house for agricultural data. It aims to learn the best way of doing things on the farm, and then distribute the information. Your individual experience may be of interest to others. Send your problems to the IHC Service Bureau.

FARM MANAGEMENT

Spreading Manure in Winter

Do you consider it advisable to spread manure on top of the snow during the winter months? This practice has become quite common in our neighborhood, but I do not consider it wise. I have noticed that the water that drains away from the fields where the manure is spread is very much discolored. Surely a lot of fertility is lost in this manner.—A. B. Ontario Co., Ont.

The discoloration of the drainage water of fields in which manure has been spread has led many to believe that such water carries away much plant food. Actual chemical analysis of such water, however, does not show any appreciable amount of fertilizing ingredients in it.

In most cases we consider it advisable to spread the manure on top of the snow each day, and the experience of many practical and successful farmers bears out our assertion that this is the best method of handling manure. It might not be advisable, however, on steep, hill-sides where much of it might be washed off with the snow.

Fertilizer for Corn

Does it pay to use commercial fertilizer for corn, and, if so, what kind do you consider best?—P. A. Dundas Co., Ont.

Commercial fertilizer is not usually advisable or profitable for growing corn in Eastern Ontario, or for that matter in any part of Ontario. It is just possible, however, that where soil is in very good tith, and it is desired to have an extraordinary yield that the application of, say, 100 lbs. or even 150 lbs. of nitrate of soda per acre, applied at about the same time that the corn was planted might have a beneficial effect, or might even prove profitable.

If the corn were being grown for grain, then the addition of, say, 250 or 300 lbs. of basic slag or acid treated ground phosphate rock might prove of some value, but it is not likely to prove profitable.—J. H. G.

Field Crops in Canada

The total area for Canada in potatoes, turnips and other roots, fodder corn, hay and clover and sugar beets this year, according to the Dominion Report, was 8,985,679 acres, with a total products value of \$210,129,000. This is \$1,670,000 more than last year. There is a decrease of \$3,120,000 in hay and clover.

The largest increase is shown in potatoes, which is nearly \$6,000,000 more than last year, although the product is less by 8,000,000 bushels,—the average selling price being 60¢ a bus., compared with 46¢ a year ago. The value of this year's product of hay and clover and fodder corn is \$130,065,000, which is less than last year's value by \$2,608,000. Potatoes, turnips and other roots and sugar beets have a value of \$60,064,000 being more than last year's value by \$4,287,000.

The quality of all the crops this year is 90 per cent and over excepting sugar beet, which is 86 per cent, and last year all crops excepting potatoes, turnips and other roots were over 90.

The values of all root and fodder crops this year by provinces were \$5,724,000 in Prince Edward Island, \$12,228,000 in Nova Scotia, \$12,696,000 in New Brunswick, \$779,000 in Quebec, \$98,467,000 in Ontario, \$5,583,000 in Manitoba, \$3,790,000 in Saskatchewan and \$6,396,000 in Alberta.

The area sown to fall wheat this season is 1,067,900 acres, being 797,200 acres in Ontario and 300,700 acres in Alberta. This is 2.93 per cent less than a year ago.

The per cent of fall plowing completed ranges from 73.57 in Ontario

to 90.40 in Prince Edward Island for the Eastern Provinces, and from 18.73 in Alberta to 34.12 in Manitoba for the Western Provinces, which is less than the averages of last year at the same date. For summer following the average in all the provinces is well over 90 per cent, for each of the three years, 1909-11.

The Case for Fall Calves

A. D. Wilson, *Manitoba*
Have the cows come fresh in the fall. If this practice were followed generally, at least 50 lbs. of butter-fat per year would be added to the average product per cow.

Having cows freshen at this time brings the heaviest milking during the winter, when one has the most time. It brings the care of the calves in the winter; it allows the feeding of the skim-milk to the calves in the winter.



The Wheat Belt is Extending

The wheat belt in Canada is wide as well as long. No. 1 hard wheat has been brought to maturity several hundred miles north of Edmonton. Our illustration gives an idea of the growth that is made in the Peace River District. This district was once spoken of as the "Frozen North."

while they need it; and to the young during the early summer, when it means so much to them.

Calves dropped in the fall are ready for grass as soon as it comes in the spring.

Cows freshening in the fall will, if well cared for, give a good flow of milk in the winter; and when the grass comes, a good flow during the early summer; and most of them will be dry during harvest and fall work when there is plenty to do without a lot of milking.

The average price of butter-fat will also be higher. Because of a larger portion of it being produced during the winter, when prices are invariably higher than in summer.

2 Nova Scotia Crop Report

A summary of the crop report recently issued by the Nova Scotia Department of Agriculture, shows that on the whole, crops in Nova Scotia have been below the average this year.

Hay is only 90 per cent of an average; oats, 85 per cent; wheat, 90 per cent; barley, 82 per cent; buckwheat, 60 per cent; forage crops, 93 per cent; potatoes, 94 per cent; and root crops, 100 per cent.

All kinds of live stock, with the exception of sheep, show an increase in numbers. On account of the dry weather there has been a decrease in the amount of milk produced of about 10 per cent.

Apples are a record crop and are reported at 360 to 400 per cent in comparison with the year 1910. The crop is estimated at 1,500,000 barrels from the Annapolis Valley alone.

A Note of Appreciation

Editor, Farm and Dairy.—Please find enclosed postal note for \$1 to pay my subscription to Farm and Dairy for another year. I cannot do without your Farm and Dairy. I would try to get a club of subscribers for you but I do not feel able to travel as I am now over 80 years old.

Farm and Dairy is doing a great deal to induce farmers to obtain more profit from their cows by better feeding and testing of each individual cow. There is much left, however, to be done in that line yet; also to get farmers to take better care of their milk or cream to be manufactured into cheese or butter. Most of us seem to think that if the manufacturer will only take the milk that that is enough.

You certainly did your part in trying to get wider markets for us farmers. I think that the racial and religious question had much to do with the way the vote went.—N. Darby, Sheppard Co., Que.

Harness Pointers

It would be well to thoroughly overhaul the harness two or three times a year, and have any breakages attended to at once.

Brown harness is more durable than black. The former leather is in its natural state, except for tanning, while the black had been subjected to certain chemicals in drying it, which remove much of the natural grease and leave the leather hard and dry. Oil could be applied, but will not fully restore the flexibility and wear-resisting qualities. To clean black harness it should be taken to pieces and washed with warm water and soft soap, using a brush and plenty of "blow grease."

Hang the harness up to let the water drain off (not in the sun), and when dry apply on the inside of the various straps and parts a thin coating of neatfoot oil. On the outside use some prepared harness-dressing. Apply lightly with a sponge and a brilliant and glossy appearance will result.

For dry or wagon harness refined neatfoot oil is a most useful preservative. In all cases the harness must be well washed and dried before the oil or dressing is applied.

On no account allow the oil to remain on the surface of the leather or it will pick up the dust and make a thick greasy coating on the outside of the harness. Just put on sufficient to penetrate.

A Fake.—The latest scheme out for taking money out of farmers is the "Footo Soil Testing Outfit." This outfit is being offered for \$10, and along with it "The Story of the Soil," by Cyril G. Hopkins. Professor Hopkins has nothing to do with this combination offer and, having tested Footo Soil Testing Outfit in his laboratories, pronounces it a fake.

MORE MILK—How to Get It

If you feed your cows merely to keep them alive, they straw will suffice as a food. But, if you want milk—more milk than corn, bran, hay, or ensilage will produce, then there's only one feed worth considering. It's called

BARTLETT "FARMER BRAND" FANCY CHOICE COTTONSEED MEAL. No other feed equals "Farmer Brand" in Protein, the milk producing element. "Farmer Brand" is guaranteed to contain 41 to 48 per cent Protein. It has six times the feeding value of corn, four times the value of bran, hay, or ensilage, or Linseed Meal or Gluten Feeds. Use it once and you will never do without it. One trial convinces. SAMPLE TON PRICES: \$33.00 per ton f.o.b. Windsor, Woodstock, Hamilton, Brantford, or Brownsville. \$24.00 per ton f.o.b. Toronto, Peterboro, or Kingston. Sample 500 lb. lot, \$9.00 f.o.b. either point. Send check for sample lot, and watch the milk increase. It never fails.

Our famous booklet "Food Facts" tells why. Full of information on feeds and feeding. Free for the asking. Write now. **THE BARTLETT CO.** 418 Hammond Bldg Dept. C. DETROIT, Mich.

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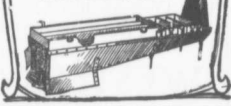
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SOUTHBOUND—First train leaves South Porcupine 12.30 p.m., Dec. 3rd, arriving Toronto 7.30 a.m. following morning.

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We want to hear from every reader of FARM AND DAIRY who has anything to buy, sell or exchange. Have you a FARM FOR SALE? Have you LIVE STOCK for which you want buyers? Have you a CREAM SEPARATOR, BARCOCK TESTER, INCUBATOR, BOOKS, or ANYTHING that you would like to exchange for cash or for other articles of value equal to yours?

The small trader can connect with possible customers by placing a small advertisement in FARM AND DAIRY. Our rates are 25 CENTS AN INCH, bargain counter space in our classified columns at 2 cents a word. Make out your advertisement and send it today to Farm and Dairy, Peterboro, Ont.

HORTICULTURE

Low Headed Trees

W. T. Macoun, C.E.F., Ottawa, Ont.
Three feet is a good length for the trunk of an apple tree. I believe that low headed trees will come into bearing more quickly than high headed trees.

Anyone who has tried low headed trees is enthusiastic over their advantages. British growers are not satisfied with 18-inch trunks. They want the branches to start close to the ground, and you should see the crops these trees bear!

Low heading protects the trunks from sunscald.

Buy Trees Now

The fall is a good time to purchase trees. Heel them in near the proposed orchard and thus be ready for instant action when the ground is ready in the spring.

The fall buyer gets first choice on trees. He gets the varieties that he wants. Or buy the trees in the fall and let the nurseryman keep them for you during the winter.

To heel in trees dig a trench a foot and a half deep, the same in width, and as long as necessary on a high, well sheltered spot. Place the trees loosely along the trench half a dozen to a running foot in close enough.

Put the roots in the trench and incline the trees backward until they are half lying across the excavation. Shovel in fine dirt and pile the earth well up around the roots and lower portions of the trunk.

Apple Market in Great Britain

J. M. Musson, Trade Commissioner, Leeds, England.

A general opinion is held that not for many years has there been such an abundant supply of home-grown apples on the English market as during the present season. The supplies coming forward from the fruit-growing districts have quite upped to the previous calculations of merchants as to the yield of the orchards. It is not only in the quantity but also in quality that the fruit has exceeded expectations, many of the apples being exceedingly good specimens of such varieties as Kings, Seedlings, Blenheim and Kent Beauties.

The liberal home supply, much of which is unfortunately being despatched to already overstocked markets, is somewhat depressing prices at present. English apples are selling at from 60 to 73 cts a stone, and are, outwardly ostensibly for cooking, certain varieties are sold for dessert purposes. In appearance, however, it is generally admitted they do not approach similar fruit received from Canada.

APPLE SHIPMENTS FROM CANADA

Within the past few weeks the first arrivals of apples from Nova Scotia have reached this market concurrently with supplies from the United States. A shipment of apples packed in bushel boxes has also been sent direct to Leeds by an Ontario exporter. At the same time large quantities of apples, chiefly from Nova Scotia, are being offered at auction in the sale rooms at Liverpool. In view, however, of the competition which these early shipments had had to meet with from home supplies, the prices obtained are not so satisfactory as would have been the case if English grown fruit had not been so much in evidence as is the case this year.

The following were the prices obtained at Liverpool on Oct. 27 for Canadian apples: Baldwins, \$3.05 to \$3.34 a barrel; Greenings, \$2.92 to \$3.34; Ben Davies, \$3.16 to \$3.40; Kings, \$2.92 to \$3.77; Blenheims, \$2.43 to \$2.92.

How About Commercial Fertilizers?

Prof. J. W. Crow, O.A.C., Guelph, Ont.

Is it advisable to use commercial fertilizers in the orchard? Many get the idea that if we can feed certain things to an orchard we will get certain results. Professor Harcourt, of the Chemistry Department, recently received a box of earth with the question: "Tell me just what to apply to this soil to get large crops of apples." No chemist can do this.

In most soils large quantities of food in an unobscure form. Cultivation is the secret of rendering this food available for the use of the trees.

I am perfectly satisfied that all the nitrogen necessary to supply food to fruit trees can be supplied with leguminous cover crops such as vetches, clover and crimson clover. I believe that some orchards are getting too much barnyard manure. This results in a large leaf and wood growth late maturity of the fruit and a weak tree.

To supply phosphoric acid and potash we should cultivate thoroughly. We are getting down to a much finer thing than orchard cultivation; and yet orchard cultivation is the best method of feeding the tree.

It is easy to sink money on commercial fertilizers. My advice is to first cultivate, and if there is then a deficiency study the fertilizer problem.

The Nova Scotia fruit growers would disagree with these views. Prof. Crow's address at the late meeting of the Ontario Fruit Growers Association. What has been the experience of FARM AND DAIRY readers with commercial fertilizers in the apple orchard.—Editor.

APICULTURE

American Foul Brood

Morley Pettitt, Provincial Apiarist

American foul brood is caused by bacteria that reach the healthy young larvae by means of infected food unsuspectingly fed to them by the nurse bee. In most cases the larvae die when nearly ready to seal up, and most of the cells containing infected larvae are capped. The dead larvae soften, settle to the lower side of the cell in a shapeless mass, at first white or yellow, changing to coffee color and brown. At this stage it becomes glutinous, so that if it is pricked with a toothpick the contents will rope out half an inch or so when the pick is slowly withdrawn. It adheres to the cell so it cannot be lifted out entire. It has the odor of a poor quality of glue. When the cell is opened it forms a tightly adhesive scale, of very dark brown color, which cannot be removed without tearing the cell wall.

Where the infected larvae are capped the cappings turn a darker color and become flat or sunken, the workers perceiving that something is wrong usually start to tear off the capping, but, discovering the condition of the contents, they generally do not leave it with a small perforation in the centre until quite dry, then the capping is removed, and in time honey may be stored in the cells containing the scale of disease. The millions of disease spores then float out into the honey, which becomes a medium for carrying the disease to other healthy larvae by robbing, in the same or some other apiary. Some of the honey is also carried into the supers, to make room for alterations in the brood nest, and is marketed in the form of bottled or section honey.

To be cured of this disease a colony must be freed from all infected brood-comb and honey. To do this we simply take it away. But in the operation some precautions are neces-

sary. We must see that the colony will get healthy food as soon as the unhealthy food is taken away, and have means for building new comb at once. So the operation should be performed during a honey flow, and to make it perfectly safe a good plan to insert a division board feeder of sugar syrup.

We must take precautions against starting robbing, or causing the treated colony to scatter to other hives or swarm out, be lost, and carry infection to other places. The operation should be performed in the evening when the bees are settling down for the night and the treated hive should be covered with queen-excluding metal to hold the queen in case of swarming out the next morning. A regular queen-excluder laid on the bottom board under the brood chamber will answer the latter purpose. They should also be given a clustering space to occupy, as in the case of a natural swarm. Whenever bees are disturbed in the hive they will take out the wax with honey from the comb. As this will happen when the hive is being treated, and some of this diseased honey may be stored in the new comb, it is thought best to remove these after three or four days and require them to make a second start.

METHOD OF TREATMENT

When there is a good honey flow on, go to the evening, taking a set of frames with one-half inch starters of foundation in them. Take the combs out of the hives, shaking the bees from them, back into the hive. The bees will take out the wax. It will be necessary to brush the bees off instead of shaking them. Get these combs immediately under cover, and clean up very carefully any honey that may be about, as the robbers colonies cannot carry home dirt. If the honey flow is at all uncertain, it is better to put in a feeder with this sugar syrup.

On the third or fourth evening after the first operation, remove the hive from its stand and set in its place a clean disinfected hive containing frames with full sheets of foundation. New brood cells from the starters into the new hive. Even greater care must be taken than at first to avoid leaving any honey or bits of comb about. Positively no honey is to be used or left in the hive in either the first or second treatment.

You have now made an artificial swarm of this colony. It must be given the conditions a new swarm likes, or it will leave. A new swarm likes plenty of ventilation and shade, and also room to cluster for a while without having to crawl in between sheets of foundation. To satisfy this natural desire, it is best to place an empty hive under the one containing the frames of foundation. If for any reason this cannot be done, two or three empty frames are placed in the brood chamber for a couple of days. This simple precaution will generally prevent the swarming out which so often happens in treating foul brood; but as the wax is not to be used or left in the excluder on the entrance as well.

All combs from the supers as well as from the brood chamber of the diseased colony, together with any extra built on them, must be either burned or melted, and boiled thoroughly before the wax is fit to use again. The honey that is removed is entirely unfit for use, even if it has been filtered for a full half hour it is not safe. The only safe way to dispose of it is to burn it, or else dig a hole and bury it deep enough to be out of the reach of any bees. The directions have been followed carefully and thoroughly, the treatment should be successful. To make sure, however, the brood must be examined again in about three weeks and again the following season.

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Poultry Pointers

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The prime factors in breeding disease are unsanitary surroundings, dampness, crowding, impure water, improper food, neglect, and want of exercise. Under such conditions,

even the strong, sound constitution will break down, and with it vanishes immunity.

Place no reliance in the theory that breeds contaminate by simply seeing a different variety on the other side of the fence. It might be as reasonable to suppose that some of the eggs will hatch pure by allowing the watchdog to come in sight of the hens.

What is the Just Method?

(Concluded from page 6)
you were!" until they know more about testing milk.

In reply to these arguments against the fat-casain plan, we may say that while testing may be somewhat expensive, it is worth the cost to insure honesty and justice as between man and man; that testers for both fat and casain in milk are practicable and accurate if properly operated; and that these tests can be made at factories under present conditions, as we have demonstrated during the season of 1911, by sending a man to make fat and casain tests at cheese factories in both Eastern and Western Ontario.

With reference to the objection that patrons are not familiar with these tests, we should observe that it is time that a campaign against ignorance and in favor of knowledge was begun with vigor. In saying this we are not casting any reflections against patrons of cheese factories, for behold how little we all know of that vast sea of knowledge open to the mariner from any and all ports; or, to change the figure, how little we all know of the vast crops growing on the farm of science and knowledge.

A PRACTICABLE TEST, FAT PLUS 2

As an alternative to the actual testing of both casain and fat in each patron's milk, we have suggested the determination of the percentage of fat in milk by means of the Babcock test, then adding two per cent. That the "fat + 2" is not enough for all practical purposes is indicated by the results of tests for casain at 10 cheese factories in Ontario during the season of 1911, May 10th to September 15th, where the average percentage of casain in milk of between 400 and 600 patrons, was 2.22. The average percentage of fat in the milk as delivered by these patrons was 3.44. While we advise the use of both the milk-fat and casain test for milk to be made into cheese, the modification suggested is near enough for all practicable purposes, and will answer the purpose until patrons have become sufficiently educated to require both tests, or until some one is able to combine these two tests in one operation.

The excess of casain in above two per cent. is counter-balanced by the fat and casain lost in the whey, so that when the factor two is added to the percentage of fat we have for all practical purposes, the available percentage of fat and casain in milk for cheese making.

Summarizing and concluding, we would observe:

1. Milk and cheese at factories ought to be tested, because of the natural and artificial variations which milk is subject to.
2. Both fat and casain ought to be determined and both are of equal value pound for pound for the manufacture of cheese, at least, casain is worth as much or more per pound than is milk fat, because it is the nitrogen and moisture carrying compound, which makes it of special importance in milk for cheese making.
3. Legislation compelling the testing of milk at cheese factories and paying for the same on a fat-casain basis, and the appointment of public inspectors for the purpose of accurate testing; may be necessary in the near future to prevent fraud on the public and to obtain "cold justice" for patrons of cheeseries throughout Ontario.

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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.

Certificates for Cheese and Butter Makers

Gen. A. Putnam, Supt. of Dairying for Ontario

During the session of the Provincial Legislature for 1910, legislation was passed providing for the granting of certificates to cheese and butter-makers in the Province of Ontario. In accordance with the provisions of this Act, the Advisory Board called for applications for certificates and upon receipt of these the qualifications of the applicants were thoroughly looked into and certificates granted accordingly.

While the great majority of experienced makers were given permanent certificates, 472 "one year" certificates were granted to cheese-makers and 45 "one year" certificates to butter-makers. These "one year" certificates, of course, included a number of men who had not up to the time of granting certificates taken full charge of the manufacture of cheese or butter, but had, in the opinion of the Advisory Board, sufficient experience as first assistants to warrant the Board in granting them a permit or "one year" certificate.

Where an honest effort has been made on the part of the recipients of these one year certificates to take advantage of the instruction afforded by representatives of the Department, and have shown that they are capable makers, either a permanent or "one year" certificate will be furnished as soon as the old certificate has been returned to the Department. All makers concerned will be communicated with regarding the renewal of certificates early in December. It will be in the interests of all such to make plans to attend one of our Provincial Dairy Schools.

Dairy School graduates who were given permission by the superintendent of the dairy schools from which they graduated, to take charge of a factory or creamery during the past season, and have made good, will be given permanent certificates from the dairy school concerned before the session of 1912 opens.

While the Department was necessarily quite lenient in the granting of certificates at the beginning of the system, it will be the policy to draw the lines a little closer as conditions warrant. It is fully expected that the benefits which resulted from the granting of certificates will be more marked as the years advance.

The Dominion Dairy Conference

A conference of dairy experts from practically all parts of Canada was held in the office of Dairy Commissioner J. A. Ruddick, Ottawa, on Wednesday and Thursday of last week. Most of Canada's leading dairy authorities were present. Dairy Commissioner Ruddick presided at the various sessions. A photograph of the delegates and the names of the most of them is published on page five in this issue.

The object of the conference was explained by Commissioner Ruddick in his opening address. He stated that the Department of Agriculture desired to bring about greater uniformity in the dairy practices of the different provinces. Under the general standard of the dairy products manufactured in Canada might be improved. He pointed out that it was held in Ottawa. Space does not permit of an extended report being given in this issue of the discus-

sions, several of which were largely technical in nature. The various resolutions that were passed as a result of the conclusions reached by the discussions are published on page 12 in this issue. These resolutions practically give the results of the conference.

At the opening session on Wednesday Hon. Martin Burrell, Dominion Minister of Agriculture, gave a brief address of welcome, which was responded to by Mr. G. A. Putnam, Director of Dairy Instruction for Ontario, and by J. C. Chapais, Assistant Dairy Commissioner, St. Denis, Que. A committee was appointed, composed of Prof. Dean and Messrs. F. Hearn, London; G. G. Publow and L. A. Zufelt, Kingston; J. C. Chapais, St. Denis, Que.; C. W. Macdougall, Sussex, N.B.; J. D. Leclair, Ste. Therese, Que.; and Wm. Waddell, Kerwood, to prepare resolutions for submission to the conference, these resolutions to embody the conclusions reached.

INTERESTING PAPERS
A paper on the "Pasteurization of Cheese Factory Whey" was read by Frank Hearn. This paper will be published in full in Farm and Dairy. Mr. Hearn has in favor of pasteurization, and his stand was sustained in the resultant discussion. This led to the passing of the resolution given elsewhere in this issue.

Mr. G. G. Publow submitted a paper entitled "Legislation for the Proper Branding of Whey Butter." This paper is published in full on page 12 of this issue. Its discussion was led by L. A. Zufelt. Both speakers favored the branding of whey butter and the conference endorsed their stand by passing the resolution published on page 12.

An excellent paper entitled "Testing Cream at Cream Gathering Creameries" was submitted by J. F. Singleton. On Thursday morning, Dairy Inspector J. D. Leclair of Ste. Therese, Que., read a paper entitled "Maximum Acidity in Pasteurized Cream." Both these papers will be published in Farm and Dairy. The discussion of the latter was led by Dairy Instructor C. W. Macdougall.

GRADING CREAM
The grading of cream at creameries was ably treated by Dairy Commissioner C. Marker of Calgary, Alta. Alberta has advanced further than any other province of Canada in the matter of grading cream. Mr. Marker showed that cream grading has greatly improved the average quality of the butter manufactured in that province and showed in detail how the work is conducted by the Government, which controls the creameries.

Dairy Superintendent W. A. Wilson of Saskatchewan, in the attendant discussion, stated that Saskatchewan was arranging to follow in 1912 the example that had been set by Alberta. They have had some experience with the grading of poultry handled through the market, which has been successful and which has led to a marked improvement in the quality of the birds received from the farmers.

PAYING BY TEST
The most important subject discussed related to the payment for milk received at cheese factories. It was hoped that the conference might reach a decision as to some uniform method of paying for milk which could be recommended by dairy authorities. The conference, however, failed to reach a conclusion.

Professor Dean led the discussion by the reading of the paper published on page three of this issue. Professor Dean has long advocated paying for milk according to its test for butter fat plus two. He said that the method of paying for milk by the use of both the butter fat and casein test and reported the results of tests that had been conducted by his depart-



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ment this year. He contended that this test was practical if conducted on the basis laid down by its originators.

Mr. Geo. H. Barr, Chief of the Dairy Division, agreed with Professor Dean that the most accurate basis of paying for milk was by the butter fat and casein tests, but claims that very few makers are qualified to conduct these tests. He gave the results of some investigations he had conducted during the past year and suggested the adoption of a table which would enable makers to figure out the percentage of butter fat and casein in milk in a simple manner. He further suggested that if factories would contribute about \$1 a patron it would be possible for them to organize and employ competent men to test the samples of milk from all the factories.

Mr. J. F. Singleton reported the results of experiments that he had conducted at the Kingston Dairy School, which went to show that the results obtained from the casein test could not be relied upon, as they varied greatly according to the temperature of the room in which they were conducted as well as being affected by other influences. He contended that it was impossible to conduct the casein test accurately in the ordinary factory where sometimes when the tests are started in the morning the temperature varies many degrees in the course of a couple of hours.

All present seem agreed that the butter fat and casein test was the best, and also that it needs to be further perfected to make its use practical in connection with the average factory. It was stated that experiments are being conducted with the object of discovering some form of test that will decide both the butter fat and casein contents by the one test. All present also seemed agreed that the pooling system of paying for milk by weight was abso-

lutely unfair and unjust and much the worst of any.

When the resolution committee came to deal with the matter it submitted the following resolution to the conference:

"Resolved, That in the opinion of this conference a system of payment for milk at cheese factories by pooling or weight of milk is an unjust method of distributing proceeds from sales of cheese.

Resolved, That while it is generally agreed that both fat and casein should be taken into consideration in the payment for cheese factory milk, yet owing to the limited experience with the casein test and until such time as the casein test can be placed in the hands of men who are competent to handle the same, the present systems of payment according to fat or fat plus 2 is recommended.

NO DECISION REACHED

Regret was expressed that the committee had not been able to decide on some one system of paying for milk as being the best that can be used at present. It was pointed out that to recommend two systems as proposed by the resolution would only have the effect of leaving the situation practically the same as it has been for the past ten years and that it might lead to considerable bitterness and strife at factory meetings where the patrons could not agree upon which of the two systems to adopt.

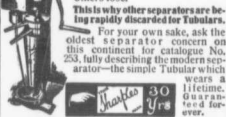
When it was found that the conference could not agree on any one system it was moved by Mr. Barr that the resolution be held over for further consideration until the results of further experiments become known in the hope that these may lead to the adoption of some one uniform test. On being put to the meeting Mr. Barr's resolution carried, Professor Dean being the only one to vote in favor of the first resolution.

(Continued on Page 12)

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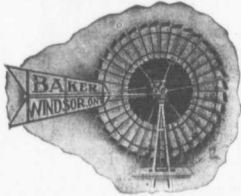
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Cheese Department

Makers are invited to send contributions to this department to ask questions on matters relating to cheese making and to suggest subjects for discussion. Address editors of the Dairy.

Legislation for the Proper Branding of Whey Butter

G. G. Publow, Kingston, Ont.

In the dairy industry of Canada the latest substance to assume noticeable proportions is the now well known product, whey butter, and it is the object of this paper to describe briefly the importance of its control, and at the same time furnish material for discussion. The delegates here assembled, with the object of impressing on the Dominion government the need of legislation for the proper branding of whey butter such, so that the consuming public may know at all times exactly what it is purchasing and so that the interests of the regular creamery-men be legitimately protected.

Whey butter is a by-product of the cheese industry. It is the product secured by churning the globules of fat separated from the other constituents of whey, with or without the addition of coloring matter, salt and water. The history of its manufacture dates back to many years ago, but in the last two or three years, owing to the improved separating apparatus and increasing market value of dairy products, together with greater business competition, it has grown to such an extent that nearly one-fifth of the cheese factories of Eastern Ontario are now engaged in its manufacture.

NOT EQUAL TO CREAMERY BUTTER. In some factories where proper facilities and surroundings exist a very fair quality of butter is made, but in the great majority, the quality is of a very inferior nature, and no one can judge the quality equal the finest creamery butter. There are a number of reasons why it is not possible to make the butter of finest quality, and some of these I wish to enumerate.

In the first place, the raw material, that is, the cream secured from the whey, is not of the finest possible quality. Before it is secured it has been subjected to various processes of bacterial life in the milk supply but from the additional hours of exposure at cheese manufacturing temperatures which in themselves are sufficient to spoil average milk in a short time. In the cheese manufacturing process, too, the fat globules lose that characteristic which ensures firmness of body, this being so pronounced at times that the butter is greasy even in cold weather.

CONDITIONS ARE AGAINST WHEY BUTTER

Then, again, the equipment, surroundings and atmosphere of the average factory are far from being ideal for the manufacture of fine quality of both butter and cheese. In fact, the whole manufacturing process frequently being one of exposure to harmful odours and bacteria during each step from the ripening of the cream to the packing and marketing of the butter.

Many of these deficiencies can, no doubt, be attributed to the fact that very few cheesemakers have the ability to make good butter under any conditions, this part of their training having been neglected in the regular cheese work. Others that could be and are good buttermakers do not do satisfactory work because of lack of help, and in the reconstituting of both butter and cheese at the one time some part is obliged to suffer.

The point may be raised by possible opponents to legislation that whey

butter is better than lots of farmer's butter and even better than some creamery butter, a statement which is perfectly true. But this is of no importance in the deciding of the issue at stake, namely, the proper branding of the butter, and it will make myself quite clear on this point.

WHERE INJUSTICE LIES

I am not particularly opposed to the manufacture of whey butter under proper conditions, but I am opposed to its being marketed under the label of the creamery butter. It is a well known fact that whey butter, as its best has poor keeping quality, and it is not hard to appreciate the injuries that might result to the general butter industry by the effects of such on the unsuspecting public, especially

RESOLUTIONS APPROVED OF BY THE DOMINION DAIRY CONFERENCE

The resolutions adopted by the Dominion conference of dairy experts at Ottawa last week, if adopted by the government and practiced in every cheese and butter factory in the Dominion, would place Canada in the front rank as a dairy country. These resolutions, having the sanction of our best dairy authorities, are worthy of consideration by the public.

Several measures that have been urged by Farm and Dairy for years, such as the weighing of cream samples, branding of whey butter, pasteurization of whey, and pasteurization of cream were put in the form of resolutions. The resolutions read as follows:

To the Dairy and Cold Storage Commissioner, Mr. J. A. Ruddick, the Chief of the Dairy Division, Mr. Geo. H. Barr, members of the Dominion Conference of Dairy Experts assembled at Ottawa, Dec. 6th and 7th, 1911, your committee on resolutions beg leave to report as follows:

WITH REFERENCE TO CHEESE

In view of the fact that a large portion of whey from the cheese factories of Canada is, and is likely to be, returned in the milk cans, and whereas it has been shown through actual factory practice that proper pasteurization of the whey, heating it to 155 degrees, ensures a decided improvement in the quality of the cheese by diminishing bad flavors, improves the sanitary condition of the factories, tends to increase the feeding value of the whey, eliminates the risk of conveying through the whey, disease germs, especially those of tuberculosis, to the stock to which it may be fed, and whereas, a practical system of pasteurization at a cost which involves no extraordinary expense has been demonstrated and successfully and voluntarily adopted by a number of factories, be it resolved that this Conference of Dominion Dairy Experts approve of the following recommendation the pasteurization of whey. Further, in view of the national importance of this question, it is also resolved that this opportunity be taken to urge the need of passing legislation in the near future that will ensure the proper pasteurization of all dairy by-products, such legislation to provide for, and place in the hands of responsible parties, authority to see that the pasteurization of the aforementioned by-products is properly carried out.

Owing to the fact that the most successful work can be done in the pasteurization of whey where no wash water is run into the whey tank and where no surplus whey is allowed to remain in the whey tank from day to day; resolved that, in the opinion of this conference, septic tanks or other means for the satisfactory disposal of the aforementioned surplus whey or surplus whey be provided at all cheese factories.

WITH REFERENCE TO BUTTER

Resolved that, in the opinion of this

if the butter was used for export.

If the quality of whey butter is good enough, selling it as such will not affect the market price, but selling whey butter of inferior quality for high prices under the brand of finest creamery is something that should not be permitted.

The consuming public should be protected and the solidity and reputation of the dairy industry of the Dominion for honest goods of unquestionable quality should be maintained at all cost. It is with this object in mind that this paper has been prepared, and I submit its contents to you with the hope that with your support it may be instrumental in accomplishing the object for which it is intended.

Use of a Standard Scale

Conferees, a standard scale should be used for weighing Babcock samples of cream for testing, and that such scales should be inspected at least once a year at the factory.

Resolved further, that composite samples be kept in tightly stoppered bottles in a cool place, to prevent evaporation of water and undue fermentation, and whereas lack of uniformity in temperature at which Babcock cream tests are read causes a variation in readings, we recommend that samples be read at a temperature of 130-140 degrees Fahr.

Resolved that, owing to the fact that the present method of manufacturing and selling whey butter tends to injure the legitimate creamery industry of Canada, and in order also to protect the consumer, this conference recommends that all such butter have a distinguishing mark or brand.

Resolved that, owing to the fact that in Canada butter production is to a great extent limited to seven months in the year, whereas, in other countries, the production continues throughout the whole year, the keeping quality of the butter is an important factor under such conditions, and further, that it having been demonstrated that pasteurization of milk and cream adds to the keeping quality of the butter made therefrom, this conference recommends that pasteurization be adopted in order to secure this improvement.

Resolved that, in the judgment of this conference, some system of grading cream at cream gathering creameries and payment for same on a quality basis be adopted to improve the quality of Canadian butter.

The Dominion Dairy Conference

(Continued from Page 11)

Further reports of the discussion will be published later in Farm and Dairy. Among the prominent dairymen who were present, and whose names were not given on page five of this issue were O. Delaire, Secretary of the Dairy School, Ste. Hyacinthe, Que.; K. Borbeau, Inspector General for Cheese, Ste. Hyacinthe, Que., and P. W. McLaggan, Montreal.

CREAM WANTED

We are paying 31c per lb. butter-fat for cream of good flavor. We furnish cans and pay express charges both ways. Ship your cream to us.

PROMPT RETURNS

Flavelle-Silverwood
London, Ont. Limited

Pearl, Milham & the family, unimpaired of being habitable in moving the blood to give life to shrunken Watsons' attend the to conduct

M... store an return. mean at -he would dren anyt -but he thin to plainly th for carry, th, and gestion, th's butt every week She goe for her h even nig to treat h hard, str written ou a piece of work. When M money sh that she w the more first num gently an zine people Pearl had her own r... make the

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The Pio annual so Valley, ar by young year on the green flat there no surplus whey is allowed to remain in the whey tank from day to day; resolved that, in the opinion of this conference, septic tanks or other means for the satisfactory disposal of the aforementioned surplus whey or surplus whey be provided at all cheese factories.

OLD COUNTRY DOMESTICS

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

WOMEN

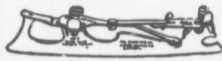
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FARM & DAIRY, Peterboro, Ont.

Not One Boy need be Without Skates



(Hockey Skates)



(Spring Skates)

Your Choice

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

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

Girls!

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

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

FARM AND DAIRY, PETERBORO, ONT.

OUR HOME CLUB

Rural Women Approve of Suffrage

We women in the country are in our own quiet way interested in the promotion of that great reform, woman suffrage. We believe that woman suffrage could not but result in better government, greater purity in politics and the removal of many of the evils that threaten many of our young people at the present day. We do not approve of breaking window glass and of assaulting the police in our efforts to make our rights known; but did women ever get an opportunity to vote on whether or not we wanted the vote, I believe that all thinking country mothers would want to have an opportunity of casting their votes in the cause of right. The following letter in the woman's department of a Toronto paper explains my idea of woman suffrage to perfection:

"We women from the country are too busy with the duties that require our constant attention to be able to form deputations to wait on the Ministry and ask formally for the franchise, but we are reading and thinking none the less in our quiet homes, and I believe you would find a larger percentage of both men and women in favor of it to-day than anyone imagines.

"Two things appear strongly to us: The liquor traffic and the white slave trade. Our boys and girls leave us to go to our ever-growing cities and towns, where we tremble for what may befall them. This is it that makes us want to vote in order to strengthen the bonds of clean men who are trying to make Ontario a safe place for our children to live in. We are awakening to the fact that however devoted and good the work of the home-maker may be, it is often wholly undone by the liquor dealer, the cigarette manufacturer, and the fiendish white alver lying in wait for our young, ignorant girls. The only way we see to meet the situation is to add the influence of the ballot to the influences of our home-making. We believe with England's 'Grand Old Man' that legislation should make it easy for men to do

right, hard for them to do wrong; especially the young."
To this we all say, "Hear, hear."
"Another Mother."

Reward for a Plucky Woman

Canadians were represented among the winners in the butter and cheese departments at the National Dairy Show held at Chicago recently. An enterprising Canadian woman made entries in these departments that did honor to herself and her country.

Mrs. Geo. Laitwhite, of Hiron Co., Ont., as her husband puts it, "had the audacity to send cheese and butter to the National Dairy Show to compete with the world." She won the gold medal on the cheese and a \$4 prize and diploma for her butter. Mrs. Laitwhite's brother, Mr. Eddie Williams, was her instructor in making the cheese. Eddie is an expert cheese maker, having made cheese in a factory in his county for three years without a cull.
Mr. Laitwhite begs to call attention to the fact that the prize cheese was made out of Jersey milk.

A Sermon

Whatever you find to do,
Do it, boys, with all your might;
Never be a little true.
Or sit idle in the right.
Trifles even
Lead to heaven.
Trifles make the life of man;
So do all things.
Great and small things,
Be as thorough as you can.
No speck of falsehood dim,
Spotless truth and honor bring:
Who will love and honor him
That says any lie is white?
He that falters,
Twists or alters,
In his duty, the slightest part,
May deceive me,
But, believe me,
He will never win my heart.

Help the weak if you are strong;
Love the old if you are young;
Own a fault if you are wrong;

In each duty
Lies a beauty.
If you say you do not shun,
Just as surely
And securely
As the kernel in the nut.

If you think a word will please,
Speak it, if it be but true;
Kindness on our cash with ease,
Though no deed is asked from you.
Words may often
Soothe and soften,
Gild a joy or heal a pain;
They are treasures,
Yielding pleasures
It is wickled to retain.

Whatever thing you find to do,
Do it then, with all your might;
Let your prayers be strong and true—
Prayer, my lads, will keep you right.
So in all things,
Great and small things,
Be a Christian and a man;
And forever,
Changing never,
Be as thorough as you can.

A Talk With Country Women

Women of the country, why do you not insist upon having running water in your homes? You know you can have anything you want in this world if you only want it "hard enough." It is time to stop whining and saying "I wish we had a bathroom and stationary tubs, but I suppose we never shall," and begin planning the room you will give up for the bathroom in the space in the kitchen where the sink and the boiler will be, and arranging where the pipes are to enter from the outside. Pretend it's a reality, a thing taken for granted, never stop thinking about it and talking tactfully about it, and some of these fine days you will have it. Your husband will give in if you can make him realize how much hard work, how many bad colds it will save you and

how much more comfort you and he and the children will have.
Do you realize how many times a day you run out bareheaded in the rain and wind or snow to bring in one pint of water? Do you realize the amount of strength it takes to lift big tubs of water on wash-day and carry them out, when if you had running water you would have to do no more than just pull out the stopper; and to lift big pots of scalding water from the stove when you should have only to turn the tap?

Your money and your good health will never be of greater value to you than they are just at present. Anyone who can afford to have other comforts can afford to have this. In the city running water in the house is an essential. It would be considered an essential in the country also.

And the cost is not great. Harness the wind that roars through your trees and along your bushes, and while you are letting it rumble your water for you. Or if not a windmill, get a gasoline engine. As for drainage, there are excellent facilities for this on almost every farm in the house as well as in the city. In part of it to be converted into a laundry put your stationary tubs in the kitchen and have a lid made to put over them when not in use, thus making them serve two purposes.

In an address before the Canadian Household Economic Association, Mr. J. F. MacKay stated that only five per cent of the rural homes in Ontario had running water. In them, Women of the country, you can raise that percentage if you really wish. Why not be comfortable? — "Rose Rambler."

Sugar Cured Ham

Mrs. W. C. Hutchinson
There is no other product of the farm to which the owner points with greater pride than his abundance of well-cured ham, one of the daily essentials for the table; and if it be cured in the sugar-cured method, certainly have one of the most appetizing dishes that can be placed before us. Should we decide to market our own "home-made," "sugar cured" ham, there would be a very great demand for them. Each year we are compelled to refuse a number of would-be purchasers. To all interested in the "sugar cured" method, we give the following recipe:

To 1,000 pounds of meat—40 pounds common salt, 10 pounds Orleans cayenne, four pounds black pepper, three pounds salt petre, half pound cayenne pepper. Mix thoroughly, then rub half of the mixture on the meat, let lay two weeks, then rub on the remainder, after which let lay four weeks, then hang and smoke. As soon as the ham is out of the meat, we apply the first half, carefully covering the skin and flesh side alike, and also well over the hook bone.

ABOUT THE COST
The expense over salted meat is very small, and I think about equal to other methods of curing, and the amount of labor for first application is also very little more than salting, and for second application it requires the labor of one man about one hour, and for smaller quantities of meat, time and labor in proportion.

Do not think the quantity of the preparation too small, for although it may look so to you, yet it is an abundance. Each ham is placed separately upon a platform, there to await the second application, when it is again rubbed with the sugar-cure. We replaced for the four weeks in a wood fire. By this time the meat is firm and dry, and it is wrapped in newspapers, then placed in sacks and covered with straw, and hung in a cool, dark place. We have used this recipe for 15 years, have never had a ham to spoil, and have never eaten better.

"Do right ting for de Missus Christmas Gift"



¶ A woman appreciates a sensible gift from her husband or son at Christmas.

¶ Something that will relieve her of the back-breaking and nerve-racking worries of ordinary household duties—something that shows her you really care—

A New Century Washer

for instance. It sweetens a woman's disposition. It enables her to get clothes help and keep them longer. It saves the clothes and thoroughly cleanses them, because it forces the water through the fabrics. It prevents disease entering your home from public laundries.

¶ Write for "Aunt Salina's Wash Day Philosophy."
¶ At all dealers or direct.

CUMMER-DOWSWELL Limited
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Shall We Print One of These Five Roses Cookbooks For YOU Free?

To a good cook with good flour and a good recipe, *nothing* is impossible.

If you use FIVE ROSES, you already have the good cook and the good flour—

We will now give you the good recipes.

If it were possible for you to meet the very finest cooks in Canada face to face, and obtain from them first hand their favorite recipes and culinary wrinkles—

That would be splendid, wouldn't it?

To obtain this *priceless* information, wouldn't you readily give a little time and trouble?

Tried and Tested Recipes

We will do even better than that for you. Our office will be the exchange for the best cooks in the country.

Here we will collect their *tried and tested* recipes—we will arrange them in *logical* order (no small task—we will print them in nice *readable* type on sturdy paper.

This will be the FIVE ROSES Cook-book—convenient in size—prettily illustrated in colors—the finest cook-book ever issued in Canada—in every way worthy of a LAKE OF THE WOODS product and of the housewives that use FIVE ROSES.

Only Bread and Pastry

And in order to make this book more valuable in its chosen sphere and cover a wider range, we will limit it to *one* special branch of home-making: THE ART OF BREAD AND PASTRY MAKING *only*;

But that's not all. Besides the *thousands* of FIVE ROSES recipes, it will contain a vast amount of practical information and every day hints invaluable to the housewife; wrinkles laboriously accumulated in our *quarter century*'s experience with housewives and bakers.

Limited Edition

The cost of publishing this work must inevitably be considerable, and, therefore, the edition *must be limited*.

So there is *only one* way to secure a copy—*it is this*:

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MONTREAL

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Get Your Copy

See list to your right.

It offers many suggestions.

We want just plain, ordinary, everyday recipes—*economical* recipes.

Your reward will be a copy of this book just as soon as it is off the press, a souvenir of the *combined* efforts of the very best Canadian housewives.

The lists will close on **January 15, 1912**, and all recipes should be in our hands on or before that date.

The name of each contributor will appear after each recipe submitted in the cook-book.

Please write on *only one* side of the paper. Do not fail to sign your name. Give full address; No. and name of street, city and province.

Don't delay—remember the edition is *limited* and we expect a big demand—get YOUR name in early.

Write out your contribution NOW—mail *to-day*.

Five Roses Flour

Not Bleached  Not Blended



The Upward Look

Our Training Ground

I go unto the Father.—St. John 14:28.

What is the main object of our lives? This is a question which we can scarcely ask ourselves too often. It is one which many of us do not ask ourselves seriously and thoughtfully, as it should be asked, as often as we should.

Were the master of an ocean steamer to look at his chart shortly after leaving port and then forget to look at it again for several days he would be fortunate did he not meet with a wreck or an accident of some kind. In any event we should all be agreed that he was incompetent to hold his position and that he should be dismissed from the service. We are the captains of our lives. What they are to become depends on how clearly we recognize this fact and on how strongly we focus our thoughts and efforts on making them what we would have them to be.

Just as the captain of a vessel requires a chart, so do we. Without a chart we will drift around helplessly, influenced by every chance wind that blows. The only safe chart we can procure, as all history proves, is the Bible, "the word of God." The course it sets for us is the one that was laid out by our great pilot, Christ. Are we following it? Are we

consulting it frequently? If not then we are running off our course just as certainly as will the mariner who neglects to follow the chart of his vessel, and the consequences will be still more serious.

In these busy, rushing days it is easy to forget—the Devil delights to help us to forget—the essential it is that we shall take some time each day to study our chart. Incidents follow one another so closely our minds become occupied with the things of this life, and we drift from our moorings without realizing it. We know that we should be loving, and kind, and brave, and cheerful, and purposeful, and we intend to be, but distractions will occur—the Devil helps them to—and it is only as we step aside daily in the quietness to study God's word, the richness of which is inexhaustible, in order that we may receive its messages for us, that we find how far we have drifted off our course, and how to steer once more to recover our bearings.

Many of us are prone to take many little side trips without understanding how difficult they make it for us to succeed with our main voyage. There is this, that and the other special thing that we desire to accomplish within the next few days, weeks or months, we become absorbed in its accomplishment and neglect to ask ourselves as frequently as we should how much it is affecting the main direction of our lives. Thus non-essentials are allowed to interfere with the essentials and injury results. How then is it with us? What are we following at this moment?

A Matchless Christmas Gift

The Gillette SAFETY RAZOR

No Stropping! No Honing!

For the man who shaves, you couldn't select a more acceptable gift than this world-famous razor. Progressive men everywhere are using it.

The "No Honing—No Stropping" feature makes a hit with every shaving man. Few can strop a razor right. The Gillette doesn't need it.

The Gillette is absolutely safe. You can shave as fast as you like. Your shave is perfect—clean, quick, safe and economical. The Gillette is adjustable for a light or a close shave.

Standard Sets
\$5.00

with 12 double-edged blades

Ask your dealer to show you the different styles of Gillettes. If he has not the goods or our catalogue, write us. We will see that you are supplied.

Pocket Editions, \$5.00 to \$6.00.

Combination Sets, \$6.50 up.

Gillette Safety Razor Co. of Canada, Limited

Office and Factory : 63 St. Alexander St., Montreal.

NO STROPPING—NO HONING

 Gillette
MADE IN THE U.S.A.
WORLD OVER
The Gillette

315

Renew your subscription to-day.

Christ always had his chart clearly before Him. "I go," He said, "unto the Father." He did, He allowed Himself to be turned from the track. All that he did was done in the consciousness of that great fact. He was going to the Father and nothing must be allowed to interfere with His purpose. Well, He knew that his life here on earth was to be but for a few short years. Hence it was important that every moment of that time should be utilized to the full. Later on we are to have the joy of spending eternity with the Father. This knowledge made the passing pleasures of this life of no consequence to Him. His purpose was to do as will His Father who had sent Him. In this He set us a great example. We, too, are going to the Father, for we must all stand before the judgment throne of God. May we leave us to the knowledge that while He is first of all a God of justice, He is also a God of love, ever anxious to aid us in the steering of our course here below.—I. H. N.

THE COOK'S CORNER

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

APPLE SALAD

Pare, quarter and core six tart apples. Cut the quarters in halves lengthwise and then slice. Wash and salt the lettuce and arrange it in a salad bowl. Add the apple and sprinkle over it a finely chopped Spanish pepper and a cupful of chopped walnuts and almonds. Pour a French dressing over all and serve.

CHOCOLATE CREAM MOUSSE

Mix one-half cup of cream with two of white sugar; boil and stir full five minutes; set the dish into another of cold water, and stir until it becomes hard. Then make into small balls about the size of marbles, and with a fork roll each one separately in the chocolate, which has, in the meantime, been put in a bowl over the boiling teakettle and melted.

PINEAPPLE SPONGE

Get a whole pineapple and heat with a cup of sugar and a cup of cold water and simmer ten minutes. Soak half a box of gelatin in half a cup of cold water till well dissolved. Mix with the hot pineapple on taking that from the fire and cool; then add the whites of four eggs beaten stiff and beat all till it begins to thicken. Pour into a mold to harden. Serve with cream or soft boiled custard.

NUT BREAD

Scald one-half cup milk and add to one-half cup of boiling water. When cooled to lukewarm and three-fourths of a cake of compressed yeast, dissolved in three tablespoonfuls lukewarm water, one-half teaspoonful each lard and butter, two tablespoonfuls molasses, one cup chopped nut meats, preferably English walnuts or pecans, one-half cup white flour, three cups or a little more of entire wheat flour, and knead like ordinary bread. Bake in a moderate oven. This bread makes a delicious sandwich when cut thin and spread with currant jelly.

CHOCOLATE ICE PUDDING

Make a custard of two cups of milk, one-half cup of sugar, a generous pinch of salt, four eggs blended but not beaten too stiff, one-half teaspoon cooked rice, and four tablespoonfuls of grated chocolate. Bake in a pudding dish until firm, not hard. Serve with whipped cream.

The Sewing Room

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

ONE-PIECE DRESSING SACK, 7254 WITH OR WITHOUT COLLAR

Such a dressing sack as this one is good, and its simplicity always makes a welcome addition to the wardrobe. It is attractive and graceful and can be slipped on with the greatest ease.

For the medium size will be required 3.54 yards of material 21, 1.32 yards 40 or 41 inches wide with 1/2 yard of insertion and 10 yards of lace-edging to trim the neck and cuffs. For the four-handkerchiefs two-by-two in square, it will be one size only.

GIRL'S BATH ROBE, 7255

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

The bath robe that is loose and ample fulfills the essential requirement. Here is one that is finished with a square collar and turned-over cuffs that are smart and attractive while they do not in any way interfere with the simplicity.

For the 10 year size will be required 4.12 yards of material 27, 3.54 yards 36, 2.12 yards 44 in wide with 3-8 yard of silk for trimming.

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

BLOUSE WITH PEASANT SLEEVES SET IN, 7253

Sleeves that are cut in kimono style and sewed to big armholes are the newest and latest to have appeared. This blouse shows them and also includes the surplus closing that is so much liked and a deep collar.

For the medium size will be required 3.14 yards of material 27, 3 yards 36 or 1.34 yards 44 inches wide with 1/2 yard of silk for trimming. 1.58 yards 18 inches wide for the chemise and under-sleeves.

This pattern is cut in sizes for a 36, 38, 40, 42, 44 and 46 inch bust measure, and will be mailed to you at address by the Fashion Department of this paper, on receipt of ten cents.

WORK OR STUDIO APRON FOR MISSES AND SMALL WOMEN, 7248

Girls indulge in a variety of occupations that may be hazardous if not probable, injury to the dress, and such aprons as this are needed. It is simple and comfortable, can be neatly slipped on and off, and can be made either with separate or attached sleeves.

For the 16 year size will be required 4.12 yards of material 27, 3.54 yards 36 or 44 inches wide with 1-2 yard 27 for collar, cuffs and trimming.

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



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OUR FARMERS CLUB

Correspondence invited

PRINCE EDWARD ISLAND

KINGS CO. P. I.

GARDIGAN BRIDGE, Dec. 4.—We are having a nice weather. Shipping is about completed. There have been large quantities of red potatoes shipped from here to Newfoundland and the United States. One chesher took 6,500 lbs. hays. Prices are good. Potatoes sell at 40¢; turnips, 16¢; oats, 45¢ to 46¢; turnips, 16¢; hay, \$12 to \$15. Horses and cattle are cheap, owing to scarcity of feed. Lambs have dropped to \$13.25 a lb. Live weight, beef, 5¢ to 6¢ dressed; butter, 21¢; eggs, 22¢; turkeys, 15¢ to 16¢. Hay is scarce and large quantities are being brought down from the west end of the island. Prospects are for a long winter.—H.P.

QUEBEC.

RICHMOND CO. QUE.

DANVILLE, Dec. 12.—Had snow for two weeks. The sleighing is good. Teaming seems to be the order of the day. Logs, at \$100 per cord, and cordwood. Dressed beef is selling at \$12.50 a lb. Pork, \$1.25 dressed. All poultry is high in price. There has been quite a number of deer killed lately. Deer is selling at 10¢. Milk is retailing at 6¢ a qt.—M. D. B.

PETERBORO CO. ONT.

NORWOOD, Nov. 23.—The district dairy meeting was held here yesterday. Our dairy instructor, R. W. Ward, reviewed the season's work and recommended better cows, better milk and better curing rooms, particularly the latter. Mr. Henry Glendinning spoke with his usual competence about the advantages of combination, and Mr. Frank Singleton talked on better milk.—F.E.

WELLINGTON CO. ONT.

FERRIS, Nov. 23.—The weather for the past two weeks has been very wintry, with just enough snow for sleighing. On account of the snow coming so early many farms did not get their ploughing completed, and a few did not get all their turnips in. Stock had to be stabled and fed much earlier than usual, and winter feed is scarce. There is a large number of auction sales of surplus stock on account of the scarceness of feed. All high priced grain and hay is scarce. Wheat, 55¢ to 56¢; barley, 50¢; hay, \$15 to \$16.50 A.M.—M.

ELORA, Nov. 20.—The early winter weather has started to get colder earlier than was hoped for, which not only leaves a great deal of feed on the ground, but also affects the outlook for winter feeding. A number of milk feeders have been stabled, and already high prices for fat stock are being offered. Hogs have abated much in price and are being sold in every way again. Large quantities of turnips are being shipped; 1½¢ the price. If the outlook continues good for high priced cattle, turnips will be higher or will be fed on the farm.—G.W.

WENTWORTH CO. ONT.

KIRKBY HILL, Nov. 23.—Stock is all stabled, with prospects of long winter than usual. Very little farm work has been done since the 15th. Several auctions of horses have been held. Prices are high. Cows go as high as \$50, but extra choice will bring a higher price. Hogs are 60¢; hay, \$23. Eight months' stock are plentiful. Not much stock is being prepared for the Christmas market. Butter is selling at 20¢; eggs, 40¢; potatoes, \$1.25; wheat, 55¢; corn, 75¢; hark, 32¢; shirts, 33¢.—C.A.W.

WATERLOO CO. ONT.

WATERLOO, Nov. 23.—The successful Farmers' Club held a very successful meeting on Nov. 15th, and discussed the spiritual, intellectual, social and financial advantages and advantages of stock as compared with Old Ontario. Four speakers took up the subject. Two delegates attended the Ontario Farmers' Club convention in Galt on Nov. 23th and 24th. We had fine sleighing for a week, but the weather took it away again. The threshing season is winding up. Plowing was well advanced. On the local market butter sells at 27¢ to 30¢; eggs, 35¢.—G.R.S.

NORFOLK CO. ONT.

BRIDGEVIEW, Nov. 23.—Fruit men are plowing their orchards. Fall sprayings with various disease killing compounds are digging for gas here. Dressed chickens are selling for 15¢ a lb.; dressed turkeys, 15¢; hogs, \$6.25. Stock are fed regular ration during night, remaining in pasture during the day.—B.B.

ESSEX CO. ONT.

KINGSVILLE, Nov. 20.—We have had a very wet fall since Sept. 21. There was no frost, and the vegetation is still green until October. One-quarter to one-third of the corn is not husked. All crops are fairly good except hay and potatoes. This country, which is usually a surplus producer of hay, will not have enough for home consumption. There has been no plowing done since Nov. 11. The prospects are that feed of all kinds will be scarce and dear.—L.C.P.

BRUCE CO. ONT.

HEPPOWIT, Nov. 23.—Winter has set in very early. The ground is now so frozen that the root crop was poor. There is usually a number of carloads of potatoes shipped from this point, but there are none to ship this year. Good milk cows are scarce and sell for a good price. Feeding cattle are not so high as last year. There is a lot of fall plowing not yet done, and not likely to be now as the ground is covered with snow and has been for some time.—K.L.

HOLSTEIN-FRIESIAN NEWS

Farm and Dairy is the official organ of the Canadian Holstein-Friesian Association. All those who are members of the Association are invited to send items of interest to the editor for publication in this column.

ONE OF CANADA'S GREATEST HERDS OF HOLSTEINS

In last week's issue of Farm and Dairy reference was made to the exceptionally fine herd of Holsteins owned by Mr. Edmund Laidlaw of Aylmer, Ont., and his record of 23.89 lbs. of butter in 7 days. One of the surprising facts about this herd is the fact that while it is probably the largest herd of pure bred Holstein cattle in Canada, only five years ago it was one of the most nearly kept records of the records of the different animals in their herd we have ever seen. The official test was on the 10th of our visit in milk, the milk being sent to the condensary at Aylmer.

The Laidlaws are great believers in liberal feeding and in the value of official tests. Being a herd of very good animals, they have been able to buy stock at sales at relatively low prices, sometimes when the animals were in very poor condition, and later to develop them into high testing animals, thereby greatly increasing their value. They have one of the most neatly kept records of the records of the different animals in their herd we have ever seen. The official test was on the 10th of our visit in milk, the milk being sent to the condensary at Aylmer.

COMFORTABLE STABLE

As one enters their stable the impression is quickly formed that the stock are well looked after. The stable is well lighted, water is kept in front of every cow and the stock is given liberal bedding. When the animals are asked to usually show their contentment, which helps to explain the excellent records made of them. They are well fed for a short time, and then letting up on the feed, said Mr. George Laidlaw. "Records can't be made in a hurry."

HIGH TESTERS

The unusually large number of animals in this herd, the fact that 10 cows, four years of age, have made records that

average 23.89 lbs. of butter in seven days. All these records were made on the farm. Two two-year-olds average an even 17 lbs. of butter and 4 three-year-olds 15 lbs. of butter in 7 days, or the average for the 25 animals, including only 4 mature cows is 20 1/2 lbs. of butter in 7 days.

One of the features of the herd is the large number of young females that are proving high testers, as proven by the wonderful average of the 10 2-year-olds mentioned above. Mr. Laidlaw attributes this to the use of a milk, Lord Roberts DeKok, which is not only being fully realized. Five of his daughters have been accepted in the Record of Performance at an average age of two years and four months, with average records for the season of 13.671 lbs. of milk and \$66.53 of butter. Two of these milked only 10 months. The dam of this bull had a record as a three-year-old of 18.28 lbs., which was the highest record for the age made that year in Canada. He was half brother of Tidy Pauline DeKok that has a record of 23.44 lbs. Unfortunately, Mr. Laidlaw made the same mistake the last time his daughters made, inasmuch as he sold this great bull when only four years old to the butcher.

THE HERD BULL

The present herd bull is Dutchland Colantha Sir Abbecker. He is a large, vigorous, milky looking fellow and so richly bred that great things are expected from him. His dam was Tidy Pauline DeKok, a cow that has a record of 24.44 lbs. of butter for 7 days. One of her daughters at five years produced 27.65 lbs. of butter, and another at three years 22.93 for 7 days. His grand dam was Tidy Abbecker, record 27.59 lbs. butter, which was the dam of the dam with records of over 23 lbs. each. His sire was Colantha Johanna Leach. This great bull was a son of Colantha Fourth's Johanna that has a record of 32.35 lbs. of butter for 7 days, and the world's record for yearly production in a semi-official test of 27.65 lbs. of milk and 1,547.82 lbs. of butter.

THE CHAMPION COW

As stated last week, the great cow of the herd is Helbon DeKok, which holds the Canadian record of 31.44 lbs. of butter in 7 days and 128.57 lb. in 30 days. This cow has a record as a three-year-old of 16.26 lbs. of milk and 711 lbs. of butter for the year. Her daughter, Helbon DeKok 2nd, has a record in the Record of Performance at three years and one month of 14,892.12 lbs. of milk and 423.12 lbs. of butter. Her record for 7 days, made shortly after calving and in spite of the fact that she retained her after-birth, was 423.12 lbs. of milk and 13.9 lbs. of butter, and for 30 days 1,720 lbs. milk and 34.86 lbs. of butter. This is one of the daughters of Lord Roberts DeKok, she is a fine, large cow with a well formed udder and superb milk veins. Three other daughters have made the highest record of the herd. One is a full sister to Helbon.

(Continued on page 19)

ABSORBINE STOPS LIMPNESS. From a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar sore on the leg, it will cure you without blister or remove the hair and burn the skin. It is sold in 1/2 lb. bottles with each bottle two free. A BOTTLE OF ABSORBINE, J.B. Liniment for man, woman and child, and a bottle of the famous "Red Foot" Liniment. Write for more if you will. 41 and 42 a bottle for 10¢. Sold by W.F. YOUNG, P.O. Box 135, Lyman, B.C., Montreal, C.

CHEAP FEED Dairyman Feed Cotton Seed Cake. Guaranteed Analysis: Crude Protein... 28 per cent to 38 per cent. Crude Fat... 6 per cent to 10 per cent. Crude Fibre... 15 per cent to 25 per cent. Carbohydrates... 58 per cent to 65 per cent. Feed three pounds per head per day along with oatmeal or other feed. Price, \$3.00 per ton, ex-warehouse.

GEO. KEITH & SONS Toronto 124 King St. East. Sederstrimmers since 1866.

Abe Lincoln said: "I will study and get ready and maybe my chance will come. It will pay you to study during these winter evenings. Then you will be prepared to answer your questions. All Agricultural books are to be had at lowest prices through Farm & Dairy, Peterboro.



SYNOPSIS OF CANADIAN NORTH-WEST AND REGULATIONS

ANY PERSON who is the sole head of a family, or any male over 18 years old, who has purchased a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency, or Sub-Agency, for the District. Entry by proxy may be made by any agency, on certain conditions, by father, mother, son, daughter, brother or sister through a power of attorney, or by a person intending homesteaded. Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least five acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister. In certain districts a homesteader in good standing may pre-empt a quarter-section, located by a survey of the land, at \$3.00 per acre. Duties—Must reside upon the homestead or pre-empted land in each of three years from date of homesteaded entry including the time required to sign homestead patent and cultivate fifty acres extra. A homesteader who has exhausted his exemption, may enter for a purchased homestead in certain districts. Price \$100 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$1000.

W. W. COORY, Deputy of the Minister of the Interior.

Y. B.—Unauthorized publication of this advertisement will not be paid for.

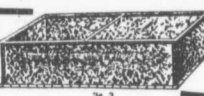
PERFECT Maple Evaporator. Price low—quality high—product the best possible—the kind you like syrup—it retains its maple taste—all unnecessary expense and middlemen's profits cut out. Sold at a price that will give you a guaranteed. Write for pamphlets and recommendations. Do it now.

Steel Trough & Machine Co., Tweed, Ont.

BREEDERS' DIRECTORY. Cards under this head inserted at the rate of \$4.00 a line per year. No card accepted under two lines, nor for less than six months, or 3 insertions during twelve months. HAMPSHIRE PIGS—Canadian Champion herd. Boar head bearers. Sows three months and under.—Hastings Bros., Dresshill, Ont. HOLSTEINS—Young stock, for sale, bred by Imperial Pauline DeKok, whose 15 nearest dams average 26.20 lbs. butter in 7 days.—W. F. Young, Peterboro, Ont. CLYDESDALES—Home of Amie. (Imp.) Holsteins—Home of King Farnie. Sires: Glomfield, nearest 7 dams, 7 lbs. butter in 7 days.—W. F. Young, Peterboro, Ont. B. M. Holby, G.T.B. & P.O. Manchester, Ont., Myrtle, G.P.R.

You Can Bank On Our Tanks

Because They are Made to Last a Lifetime



May cost a little more at first—but they last, so are cheapest in the long run.

Made of the very best American galvanized steel—every rivet galvanized, every joint soldered. No leaks, no rust, no bulge, no strain. If that's the kind YOU want, write for our free catalogue.

Ontario Wind Engine and Pump Company, Limited
WINNIPEG TORONTO CALGARY

Live Stock Judging Course

Under the auspices of The East, Peterboro Farmers' Institute, Branch of the Department of Agriculture and The Ontario Agricultural Society.

A Free Course will be held at Keene

ON DECEMBER 20th and 21st

PROGRAMME

WEDNESDAY—9.30 to 12.0 p.m., Hogs—J. E. Brethour, Burlington. 1.30 to 4.30 p.m., Dairy Cattle—F. R. Mallory, Frankford.
THURSDAY—9.30 to 12.0 p.m., Light Horses—C. M. MacLae, Ottawa. 1.30 to 4.30 p.m., Heavy Horses—C. M. MacLae, Ottawa.
ALL WELCOME

NEWVERMIFUGE

The best and most effective remedy for Bots and other worms in horses.

(Guaranteed by the Farmers' Horse Remedy Co. under the Pure Food and Drugs Act, June 20, 1907, Serial No. 33771.) It is guaranteed to kill and bring from the body dead in from 18 to 24 hours all pin worms and bots.

It is absolutely harmless and can be given to mares in foal before the eighth month. Practically horse owners have written us Newvermifuge has removed between 2500 and 3000 bots and worms from a single horse. An animal with its stomach full of worms cannot get fat help being obstinate and sour for one day. Beware of imitations.

Farmers' Horse Remedy Co., Dept. A.S. 392 - 7th St., Milwaukee, Wisconsin.

Is Your Horse Lame?

Fleming's Spavin Cure (Liquid) cures the lameness and removes such blemishes as are soft to the touch—Bog Spavin, Curb, Thoroughpin, Capped Hock, Collar and Shoe Blisters, and recent cases of Splint and Bone Spavin.

Fleming's Spavin and Ringbone Paste cures Bone or "Jack" Spavin, Ringbone and Sidebone.

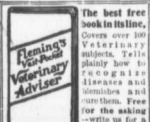
These remedies do not **always** cure—but we'll refund your money every time they fail. Try them on the worst cases you can find—we'll stand behind them, as we stand behind all Fleming's Remedies.

Fleming's Tonic Heave Remedy—a remarkable tonic, which cures Heaves because it cuts the system right.

Fleming's Colic Cure—will surely cure if anything can.

Fleming's Lump Jaw Cure—the first successful Lump Jaw Cure—to-day the standard treatment.

FLEMING, Chemists, 83 Church Street, Toronto.



MARKET REVIEW AND FORECAST

Toronto, Monday, December 11, 1917.—Most of the business nowadays is in the hands of the retailers. Wholesale houses report the usual falling off in trade that always precedes the Christmas holidays. In closing up the year's business, most houses find that the volume of trade has been satisfactory. Payments from the North-West are not coming in as fast as was expected, but this is believed to be temporary as crops are not all marketed yet.

The meat situation on the American Continent is serious indeed. Supplies in the United States are falling off in face of increased demand, and now Dr. Rutherford sounds a similar warning in Canada. Dairy cows have to a certain extent taken the place of the beef in both countries, but that there will be a great shortage of beef in the next two or three years seems to be certain. The only reasonable explanation of that stock farming is not comparatively profitable.

There have been few changes in farm produce this week. Coarse grains are a little easier, other lines are firm and cattle show a 10c to 25c advance.

WHEAT

What quotations on the local market remain unchanged. There is a good steady export demand, and in that direction most of the trade is going. Wheat prices at Chicago have gone up and down at the will of speculators, but values locally have not been greatly affected. No. 1 Northern is quoted at \$1.08; No. 2, \$1.05; No. 3, \$1.01; Manitoba feed wheat, 72c. As usual, there is very little to say about Ontario wheat. Shipments are small at 70c to 80c.

COARSE GRAINS

The coarse grain market could not be much quieter than it now is. Practically no grain is changing hands, and quotations are purely nominal. Oats and corn are down slightly from last week's quotations, corn selling at 70c and 69 1/2c for new. Maltin barley is 85c to 88c, and feed 70c to 75c; oats, C.W., No. 2, 46c; No. 3, 43c; Oats, 41c to 43c; corn, 69c to 70c; buckwheat, 55c to 60c; and rye, 91c. Corn at Montreal has declined 2 1/2c, and now sells at 41c to 42c. No. 2 are quoted at 43 1/2c; No. 3, 41c to 42c; No. 2 local, 47 1/2c; No. 3, 45 1/2c; peas, \$1.00 to \$1.20; barley, malting, 90c to \$1; feed, 65c; buckwheat, 55c to 60c.

HAY AND STRAW

Latest official returns of the English hay crop show that it will be 20 per cent below the average. The demand therefore for Canadian hay is unusually keen. The demand from local points in Ontario is also great and the hay market is on a very strong basis. No. 1 hay is quoted at \$15.50 to \$16; inferior, \$11 to \$12.50; baled straw, 87 to 88. The retail price of good timothy is \$18 to \$21; mixed hay, \$15 to \$17, and straw, banded, \$15 to \$17. The hay at \$16 to \$17; No. 2, \$14 to \$15; and inferior, \$12 to \$13, is similar with No. 1. No. 1 sells at \$11.50.

POTATOES AND BEANS

The demand for potatoes for local consumption is very strong. Dealers are paying \$1.30 a bag for Ontario potatoes on track here and \$1.20 out of store. Dis-

ware are quoted at a 5c premium. Supplies are short at Montreal. Green Mountains are selling at \$1.25.

Beans here are quoted at \$2.25 to \$2.30 for primes and \$2 to \$2.15 for hand picked. At retail three pound prices are quoted at \$2.20.

EGGS AND PULTRY

Although fowls have been no further advances in wholesale quotations on eggs there is a strong demand and a firm market. Dealers are offering 35c to 40c for strictly new laid eggs and 27c to 28c for fresh. The retail price is 60c. Prices at Montreal have advanced and dealers are now paying 25c to 26c for No. 1 stock and 23c to 25c for select. New laid eggs retail at 60c.

An amusing feature of the markets is the unusual weakness in dressed poultry for this season of the year. At all country markets prices are at a disappointing level from the farmers' point of view. Wholesale quotations here are: Chickens, 10c to 12c; fowl, 7c to 7c; ducks, 11c to 12c. Retail prices are: Chickens, 15c to 16c; fowl, 10c to 11c; turkeys, 25c to 28c; ducks, 14c to 15c; and geese, 15c.

DAIRY PRODUCE

Dairy produce is strong all over the world, and dealers are counting on firm prices for the next few months. They are now offering 27c to 28c for No. 2 creamery cream, 30c to 31c; solids, 27c to 28c. In cheese, twines are quoted at 15 1/4c and large, 15 1/2c.

HORSES

There is little doing in horse lines, and prices are unchanged. Heavy drafters are now quoted prices at \$1200 to \$1500; medium weight drafters, \$160 to \$190; agricultural horses, good, \$160 to \$225; fair, \$100 to \$150; express horses, \$175 to \$225; drivers, \$100 to \$150; serviceably sound, \$70 to \$125.

LIVE STOCK

The best grades of cattle are up 15c to 20c, although poorer stuff remains very much as it was. Butchers state that they already have enough ill-finished beef at hand to cover the Christmas and New Year's season. What they are after now is first class animals for the Christmas trade.

A week ago to-day receipts were small and prices showed an immediate advance on those ruling the week previous. A price of \$6.00 was offered on a particularly well finished bunch. Cables from the Old Country were encouraging, and here there has been some good export trade would have been done. Local butchers, however bought up all that was offered. Receipts continued light through-out the week and were quickly disposed of. Latest quotations on butcher cattle would be about as follows: Choice, \$5 to \$6; good, \$4.75 to \$5.25; common to medium, \$4.75 to \$5.50; cows, choice, \$5 to \$5.40; common to medium, \$3.75 to \$4.90; and bulls, \$2.75 to \$3.50. The best trade is done in exporters at \$5.25 to \$6.50 for choice and \$5.90 to \$6.25 for medium. Feeders are quoted at \$3 to \$3.25; and cull, \$2.50 to \$3.25.

The demand for choice milk cows continued keen at \$60 to \$90, and from that down to \$25. Springing cows are selling \$70 to \$80. The market for alpaca rams firm at last week's levels. Fews are quoted at \$3.50 to \$3.75; bucks and culls, \$2.75 to \$3.00. Calves are \$4 to \$5. Receipts of hogs have been lighter and of a better quality, and packers are now paying \$5.10 to \$5.15 for common hams, and \$5.60 to \$5.55 fed and watered on the market. Warmer weather has not increased the demand for cattle, and while the market is steady fancy prices are not being realized at Montreal. Here also the quality of the offerings are not what is to be expected. The inferior cattle inclines to be slow. Butcher cattle are quoted at \$5 to \$6.50 for choice; common to medium, \$2.75 to \$3.25; canners, \$2 to \$3.25. Choice butcher cows go at \$5.25 to \$5.50, and medium down to \$4.50. The market for sheep is quiet. Lambs continue firm. Ewes are quoted at \$3.75 to \$4; bucks and culls, \$3 to \$3.50; and lambs, \$5.75 to \$6; calves, \$3 to \$3.75.

Buffalo live stock—medium steers, \$7.50 to \$8; shipping, \$6.25 to \$7.40; butchers, \$5 to \$6.75; heifers, \$3.75 to \$5.25; cows, \$2 to \$3.50; Yorks, \$2.50 to \$3.50; hogs, heavy and mixed, \$4.40 to \$6.00; lambs, \$5.00 to \$6.45; ewes, \$3.75 to \$3.75.

MONTHLY HOE MARKET

Montreal, November 9.—The receipts of live hogs this week were fairly heavy, but met with a good demand,

HOLSTEINS GRADE FOR SALE

We have for immediate sale, Breeding Choice Grade Holstein Heifers, coming two years old.

One of these heifers is Prince Joe Calanthy 3rd, whose dam has an official record of 23.23 in hand picked.

Prince Posch Calanthy 3rd was sired by Prince Posch Calanthy, whose dam and sire were averages over 25 lbs. butter for 7 days.

These heifers are all bred to a pure blood sire. For further particulars, apply to **BESWETHERICK BROS., HAGERSVILLE, ONT.**

HIGHLAND FARM HOLSTEINS AND YORKSHIRES

Young Bulls, from six months to one year, from High Brod Stock. Also, York shires, both sexes; all ages.

ROBERT CAMPBELL, ROSEHATH, ONT.

Lyndale Holsteins

Offers two young bulls born September, 1916, one of them from tested ancestor of Brightest Ontario and sired by a son of a 20.56 lb. yearling daughter of Henge rel and Ke. For particulars apply to **BROWN BROS., LYN, ONT.**

RIVERVIEW HEAD

Offers bull calves from 2 to 10 months old, bred by KING ISABELLE WALKER, whose 3 nearest dams and sister average 30.18 LBS. BUTTER IN 7 DAYS and 115 lbs. in 30 days from dams of like breeding, at exceptionally low figure, a make room.

P. J. SALLEY, LACHINE RAPIDS, QUE.

ACTIONEER

My Lifetime has been spent in raising and selling Dairy Cattle. Have sold sales from the Atlantic to the Pacific. For particulars apply to **ROBERT J. HAEGEL, ALGONQUIN, ILL.**

Leslie Farm Holsteins

FOR SALE—Two young bulls fit for service, one from a 21 lb. four-year-old, and one from a 24 lb. cow. Both are good individuals. Write for further information.

W. E. THOMPSON, WOODSTOCK, ONT. R. R. No. 7.

LAKESIDE DAIRY AND STOCK FARM

Offers two bull calves, 9 and 2 1/2 months. Dam of 10 months calf, half sister of Francy 3rd, sire, grandson of 50 lb. Jew. Write for particulars.

Bull calves and a few females, price low. Write for particulars.

W. F. BELL, BRITANNIA BAY, ONT. Ottawa Bell Phone.

BROOKSIDE HOLSTEIN FARM

Offers a beautifully marked Young Bull, whose 3 nearest dams average 23 lbs. butter in 7 days. His sire is a grand sire of the Ontario breed.

Holsteins from America; his dam is sired by "Johanna Heu 4th" Ltd., who carries 25 lbs. of butter for 7 days. "Colanthy 3rd" Ltd.—\$8,000 bull. Several other choice ones, best season for sale. Write for particulars.

W. L. LAMKIN, FORDWICH, ONTARIO.

GLENSPRINGS HOLSTEINS

from officially tested dams. One, sired by Inka Sylvia Beets Posch, is one of the best of the breed, which made with 12 lbs. after calving. Another, sired by Conroy Gorker brother, is one of the champion 2-year-olds, one of Dalsey Ve, being averaged over 130 lbs. milk, milked 3 times a day for 10 consecutive days.

Here is an exceptional opportunity to buy a good cow at the right price.

R. B. MALLOY, FRANKFORD, ONT.

AVONDALE FARM HOLSTEINS

Arthur C. Hardy, Prop.

We offer bull calves, all ages, and a few cows, all from the sire of 25 lbs. Johanna Colantha Glad, being a grandson of Colantha Johanna Lad and 10 lbs. Korndorke, and from a 25 lb. live year-old dam.

Also HORN DOBBET SHEEP and YOLB SHEEP. Write for particulars.

Address all correspondence to **H. LORNE LOGAN, Manager Brockville, Ont.**

HOLSTEINS

WOODCREST HOLSTEINS

A few choice Bull Calves for sale; six to ten months old. Some of Homestead Girl De Kol Sarcastic Lad, and grandsons of Pieterje 22nd. Recently tuberculin tested by a U. S. inspector. Write for pedigrees and prices.

WOODCREST FARM

RIFTON; ULSTER CO., - NEW YORK

HOLSTEINS

We have Record of Merit and Record of Performance pure bred Holstein sires in our herd. Five young bulls sired by Sir Abbecker Bull De Kol. One yearling bull (extra) by Sir Beets De Kol Poesh. Write for particulars. I must sell to make room. My cows are beginning to freshen and I need the room for my increase.

Phone connections at St. Thomas. E. C. GILBERT, PAYNES MILLS, ONT.

LAKEVIEW HOLSTEINS

Bull calf born March 25th, 1911, sired by Count Hengerveld Payne De Kol and out of Rose Rattler, 24 1/2 lbs. butter in 7 days; another one calved March 24th, 1911, by the same sire and out of Sir Sylvia 4th De Kol, 21 lbs. butter in 7 days and 88 lbs. in 30 days. Send for prices on these and several other equally good. Telephone. E. F. OSLER, BRANT CO.

RIVERSIDE HOLSTEINS

Head headed by Prince De Kol Poesh; dam was champion two years in exposition at Guelph, dairy stock. Our new herd bull is King Johanna Pontiac Korndyke, the records of dam and two near relatives make room for winter stabling we are now offering for immediate sale 6 cows from 3 to 6 years old; 18 heifers coming 5 years old; 10 young bulls from 3 to 8 months old. We are also offering our herd bull Prince De Val Poesh. This is a rare chance for someone to get a herd header, a sure and good stock getter. Inspection invited.

J. W. RICHARDSON, CALEDONIA, ONT.

FERNSDALE STOCK FARM

Breeders of Clydesdale Horses and Holstein Cattle

Our stud of Clydesdales were better stronger than at the present time. Space will not permit us giving a biography of each animal.

We have a number of Bull Calves from the Record of Merit and Record of Performance sire of the dam and two near relatives a brother to Pontiac Korndyke; sire of Pontiac Pot. 37 lbs. of butter in 7 days; sister to Pontiac Olothide De Kol 2nd, 37 1/2 lbs. of butter in 7 days—world's records.

Also, 40 Grand Holstein Heifers, raising two years old, bred to freshen from now on.

Visitors always welcome, and will be met at the C.P.R. Station, Mt. Elgin, on giving notice. Bull 'Phone No. 167.

Fierheller Bros., Mt. Elgin, Ont.

Breeders. DO YOU EVER CONSIDER



How Much You Have Lost

or how much business you do not get

Because Some One Does Not Know

you have for sale the stock they want and they buy from the other fellow who advertises?

Take the progressive, paying way of getting buyers for your live stock—Advertise in Farm and Dairy.

Your advertisement in these columns will cost you only our low flat rate of 98 cents an inch. Send us your advertisement to-day or to-morrow.

FARM AND DAIRY PETERBORO, ONT.

HOLSTEINS

WELCOME STOCK FARM HOLSTEINS

We have at the head of our herd King Blanche Lyons, whose two grand dams have a seven-day record of over 33 and 34 lbs. respectively. We have also grand daughters of Pontiac Korndyke, the only sire having two 75-lb. daughters, and granddaughters of Pieterje Hengerveld Count De Kol, in calf to a grandson of Colantha 4th Johanna, whose yearly record stands unequalled.

J. LEUZLER and C. BOLLERT CASSEL - - - ONT.

FOR SALE HOLSTEIN BULL CALVES

Bull calf born Feb. 2, whose four near relatives average lbs. of butter in 7 days. Another born May 17, dam first cow in Canada of her age to make 20 lbs. of butter in 7 days. Another bull calf Jan. 10, dam, daughter of dam of number 2, calf with official record in 7 days. Also 15 days of 14.98 lb. butter in 7 days. Also two-year-old stock bull. David Gaudtsh, 144 South Centre, Ont.

Purebred Registered HOLSTEIN CATTLE

The Greatest Dairy Breed seen for FULL ILLUSTRATED BOOKLETS Holstein-Friesian Assoc., Box 148, Baltimore, Md.

HOLSTEINS

If you are wanting HOLSTEIN, any age, either sex.

GORDON H. MANHARD, 144 South Centre, Ont.

HOMESTEAD HOLSTEIN HERD

Home of Helton Deko, Canadian champion cow for 7 and 30 days, viz., 25.34 lb. butter in 7 days, 122.87 lb. in 30 days. Herd is headed by Dutchland Colantha Sir Abbecker whose dam, Tidy 'Pansie' Deko, made 23.44 lbs. of butter in 7 days and 88 lbs. in 30 days. Also, 40 Grand Holstein Heifers, raising two years old, bred to freshen from now on.

E. LAIDLAW & SONS, AYLMER WEST, ONT.

"LES CHENAUX FARMS"

HOLSTEINS—Winner in the ring and at the pall. Gold Medal herd at Ottawa Fair.

They combine Conformation and Production.

DR. L. de L. HARWOOD, D. BODEN Prop.

FAIRVIEW FARMS HERD

—HAS FOR SALE—

Sons of Pontiac Korndyke, sire of the world's record cow Pontiac Olothide De Kol 2nd, 37 lbs. of butter in 7 days. He is the sire of seven daughters whose 7 day records average 31 1/2 lbs. each, unequalled by the daughters of any other sire of the breed living or dead. He is the sire of the young bull of the breed to date.

We also offer some of Rag Apple Korndyke, whose dam Pontiac Olothide De Kol 2nd, 37 lbs. (world's record) giving this young sire's dam, during the 100 day record that average for the 70 lbs. daughter.

We have in service, and can offer you some of Sir Johanna Colantha (Grand), a son of the highest record daughter of Hengerveld De Kol, 114 A.R.O. daughters, four over 30 lbs. each. Also, a son of Colantha Johanna Led, whose dam Colantha 4th Johanna, has a 7 day record of 32 lbs. of butter in 7 days. Her sire is higher than that average of 30 lbs. each, which is higher than that of any sire breeding and selling at a profit on anything you want in first-class Holsteins; young sire out of Sir Sylvia.

E. H. DOLLAR, REVELTONT, St. Lawrence Co., N.Y. Near Prescott, Ont.

and prices were well maintained, selected lots being put on the market in a few days. Dressed hogs are meeting with a good demand and fresh killed abattoir stock is quoted at \$9 to \$9.25 a cwt. Country dressed are quoted at \$8.25 to \$8.75.

EXPORT BUTTER AND CHEESE

Montreal, Saturday, Dec. 9.—The market here for cheese has been very quiet this week with scarcely any trading done. Cables have been scarce, and what inquiries have come have not resulted in any business. The market here where our own cheese has been obliged to put up the C.I.F. prices on account of the increased cost per pound to the coast of cheese laid out in England, and this has interfered with considerable business that might have been done. Holders are very firm, however, and will not reduce their prices and are determined to wait patiently until the demand from England comes on and takes care of the balance of the cheese left here unsold. Stocks are very light, and a couple of weeks' good trading would clear them out. Stocks in England are very light, and barely sufficient to last two or three months, and will certainly not suffice to keep going until the new season opens here. There is every indication of a period of extremely high prices prevailing throughout the winter months. The butter market is very strong owing to the scarcity of supplies, and prices are slowly but steadily advanced as the stocks are reduced. In a wholesale way finest creamery is quoted at 32c a lb., and some dealers are willing to sell at much under 30c, which price is equal to the cost of New Zealand butter laid down in Montreal.

ONE OF CANADA'S GREATEST HERDS OF HOLSTEINS

(Continued from page 17) DeKol 2nd. They have more white than their dam and are excellent individuals showing dairy capacity with well shaped udders.

They will be tested this winter and promise to make good records.

One of the finest matrons of the herd is the 16-year-old cow, Belle Desrois, purchased from Geo. Rice. When eight years old she made a 7-day record of 57 1/2 lbs. milk and 25.18 lb. of butter. Her 30-day record is 2,243 lbs. of milk and 103 lbs. of butter. This cow is a regular milking machine. She is the true wedge shape with a great barrel, a large pendulous udder, large, tortuous milk veins and a skin that it is a pleasure to handle. In fact, this cow is one of the nicest handlers we have ever seen. She has been entered in the Record of Merit four times with the following result: As a two-year-old she produced 127 lbs. of milk in 7 days; as a three-year-old, 16 lbs.; as a four-year-old, 20 lbs., and at eight years, 25 lbs.

(To be continued)

MISCELLANEOUS

Summer Hill Yorkshire Hogs

Are Not Equalled Anywhere

We offer for quick sale a few Young Sows, safe in farrow; also a dozen good Boars, bred for service. Bred from the best blood the world produces.

They must sell quick. Write to-day if you are thinking of getting one.

Will also sell any 60 head of Registered Holsteins.

D. C. FLATT & SON R. R. No. 2 Hamilton, Ontario

IT WILL PAY YOU TO TELL OUR Dairy Farmers

Of the horses you have for sale. The Dairy Farmers are money farmers. These are the horses that the Dairy and Dairy have this year enjoyed an income of \$10,000,000.

Write and get your share of the money. Have your horse in low these flat rate of only 60 cents per inch for the space you use. Have your horse in low these flat rate of any week preceding date of issue.

FARM & DAIRY, Peterboro, Ont.

CALVES RAISE THEM WITHOUT MILK

Booklet Free. STEVES, Briggs Seed Co. Ltd., Toronto, Ont.

AYRSHIRES

CHOICE AYRSHIRES Are Bred at "CHERRY BANK"

A few young bull calves for sale. Write for prices. P. D. McARTHUR, North George town (Newick Station on G. T. Y. One.

FOR SALE CHEAP

A pure breed Ayrshire Bull Calves, out of R. O. P. grand-dam gave 10.12 lbs. milk and had 537 lbs. butter in 365 days.

M. W. SEXSMITH, RIDGEWAY, Ontario

Ayrshires

World's Champion herd for milk and production. Some young bulls and bull calves, bred from S.O.P. cows for sale. A grandson of Primrose of Tangleyield in the lot. Address

WOODDISSE BROS., Tangleyield Farm ROTSEAY, OTTAWA

CHOICE AYRSHIRES FOR QUICK SALE

One bull 11 months old, one 9 months old, two Feb. bull calves—grand, large one from R.O.P. cows. A few choice females, big producers, good tests and udders. Record of Performance, etc., a speciality. Prices reasonable considering quality. Write or come and see.

WILLIAMS THORN, LYNEDOCHE, Ont. All our Bull Stock Farm, long distance phone in house.

Ayrshires and Yorkshires

FOR SALE—High class Ayrshires, all ages, including three bulls fit for service. Yorkshires, all ages. First price boar and sows 18 months old. Apply to

HON. W. OWENS, ROBERT SYMON PROPRIETOR, Riverside Farm, Montebello, Que.

AYRSHIRES

For Sale—One yearling bull and three 1911 bull calves, also grade heifers in calf. Jno. A. Morrison - Mt. Elgin, Ont.

BURNSIDE AYRSHIRES JUST LANDED

12 Bulls fit for service, Scotch winners. 4 2 year old heifers, all good freshen in Sept. and Oct. They are a grand strong lot of useful sowers with good tests. Also a few good yearlings.

R. R. NEES, HOWICK, QUE.

THE SPRINGBANK HERD OF AYRSHIRES

Contain more World's Champion milk and butter producers than any other herd in America. A few choice bull calves from record breaking dams for sale at reasonable prices. Address

A. S. TURNER & SON, 3 miles south of Hamilton, Ont.

SUNNYSIDE AYRSHIRES.

Imported and home bred, are of the choicest breeding of all four types and have been selected for production. THESE young bulls dropped this fall, bred by "Wester Hill" Genealogy, and are as good as well as a few females of various age. For sale. Write or come and see.

J. W. LOGAN, Howick Station, Que. (Phone in house.) L-3

CITY VIEW AYRSHIRES.

R. O. P. cows and two-year-old heifers for sale; one yearling bull and a fine lot of 1911 bull calves. Prices reasonable. Write or phone.

JAMES BRIG, R. R. No. 1, St. Thomas.

LAKESIDE AYRSHIRES

We have a number of the young bulls of different ages, all sired by our imported blood of four types and have been from dams entered or qualified for the record of performance. To make room for the winter we are prepared to offer these at attractive prices.

LAKESIDE FARM, PHILIPSDURG, QUE. GEO. N. MONTGOMERY, Proprietor, 164 St. James St., Montreal

Christmas Presents

That Do Not End
with Xmas

But go right on during the
entire year

At this Xmas season we wish to extend our good will to our people who read Farm and Dairy. We extend it in this tangible, practical way that you can appreciate.

Your own renewal subscription for 12 months and one new yearly subscription to Farm and Dairy—for both we will accept the low Xmas rate of only \$1.50.

Because of our greatly increased circulation we will have greater value for you than ever in Farm and Dairy next year.

At our Christmas Gift Rates we will allow you to send Farm and Dairy to friends.

3 NEW SUBSCRIPTIONS \$2.00

5 NEW SUBSCRIPTIONS \$3.00

(United States Subscriptions each 50c extra)

Why not settle all your Christmas gift obligations to your farmer friends and neighbors and your hired men by sending gift subscriptions to Farm and Dairy?

The gift will please, instruct and help-to-make-more-money and live a better life every time Farm and Dairy is issued—52 times throughout the year.

An attractive Christmas Card, announcing the gift and giver will be mailed to arrive on Christmas morning, as directed, with each Christmas gift subscription.

Why not send us many names on your gift list and avoid the worry of shopping and the dissatisfaction with gifts purchased?

Farm and Dairy is sure to please everyone interested in farming, and if a name is already on our subscription list, you will be notified at once to send another, so there is no chance of duplication.

SPECIAL NOTE.—Order now before Christmas rush to make sure the gift will be received on Christmas Day. Orders for the far East or West to be in time must reach us by December 15th, others by December 20th. Give full names, or initials, and full addresses of both subscriber and sender.

Farm & Dairy

PETERBORO, ONT.

'A Paper Farmers Swear By'

Something New

A Xmas Offer

Recently Farm and Dairy completed arrangements with a Canadian firm of manufacturers for a supply of fountain pens of a new model which we are going to give away to our people who help us.

These pens are a new model, the first of which have just been made in Canada.

It is called the "WRITE-AWAY" pen.

It is one of the most perfect working pens, and most simple in construction that we have ever used or seen.

We secured these pens at a price that enables us to make an heretofore unheard of liberal offer.

This "Write-away" pen, a model of one sewed in two is here shown, is guaranteed by the makers.

The manufacturers guarantee that:

IT WON'T BLOT—the Patent feed plunger regulates the flow of ink.

IT WON'T CLOG and IT WON'T LEAK.

It will write as long as there is a drop of ink in it.



For 2 More Weeks

We are going to give these pens away on a SPECIAL XMAS PRESENT OFFER to our people who help us to get new subscribers for Farm and Dairy.

Every person who during the next two weeks will send Farm and Dairy one NEW Subscription from a friend or neighbor taken at only \$1.00 a year WILL BE GIVEN THREE OF THESE PENS. Every member of your family can now have a CANADIAN-MADE guaranteed fountain pen. Every school child can have one. The pens will be sent postage paid.

The pen is a marvel. We have used it and it is very satisfactory.

It is an excellent fountain pen for STUDENTS, BOOKKEEPERS, SALESMEN and PROFESSIONAL MEN. It's an ideal pen for anybody.

See one of your friends at once. Get them to subscribe to Farm and Dairy. Send us his subscription, and we will send you three of these perfect "write-away" fountain pens. Remember this Xmas offer is open only for two weeks more. Get busy to-day. Show your friends our December 7th issue.

FARM AND DAIRY PETERBORO ONTARIO

SAY! WE'VE GOT AN EXCELLENT PROPOSITION HERE FOR YOU

Every reader of this paper who will before Monday, December 25th send us one new subscription to Farm & Dairy will be given at OUR EXPENSE a whole year's subscription to



The Canadian Horticulturist

Fluit Growing, Amateur Gardening, Market Gardening, and the Culture of Flowers are dealt with each month in The Canadian Horticulturist.

It will be a boon to you in your Orchard and Garden work.

Your wife will especially delight in it because of the practical nature of the flower culture department.

Your boys will obtain from it an education in all things pertaining to Horticulture.

Get us only one NEW subscription to Farm and Dairy, taken at only \$1.00 a year, and we'll send you The Canadian Horticulturist for a year. You can send it as a Christmas present to a friend, if you wish.

Circulation Department

FARM & DAIRY Peterboro Ontario.

Take Notice That

We will Publish Eight Special Magazine Numbers

For 1912

They will be the Fourth Annual Series. We know how to make them good. Our people are looking for them.

Advertisers It'll be your loss if our people—the **Monied Dairy Farmers of Canada**—do not come face to face with your proposition in every one of these special issues.

THESE SPECIAL MAGAZINES

will be:

POULTRY NUMBER

Out February 1st—Our people are enthusiastic Poultry keepers. Over 95 per cent. of them keep Poultry.

ORCHARD AND GARDEN NUMBER

Out March 7th—it is worthy of your notice that amongst our people there has been a great awakening about making money out of orchards.

SPECIAL DAIRY NUMBER

Out April 4th—At dairying our people specialize. It is in this line they make their ready money—lots of money.

FARM IMPROVEMENT NUMBER

Out May 2nd—The desire to improve farms and homes is an attribute of Dairy Farmers. They are a "home" people. Their land is the most valuable.

FARM MACHINERY NUMBER

Out June 6th—Work—manual labor—that's the most expensive thing on dairy farms. Dairy farmers are eager for labor-saving machinery.

EXHIBITION NUMBER (Our Fifth Annual)

Out September 5th—Not a man with a proposition worthy of notice will miss this great annual. It will appeal and appeal strongly to all our readers.

HOUSEHOLD NUMBER

Out October 9th—The women! They buy or have the say in buying over 50 per cent. of all merchandise. You can't afford to overlook them.

BREEDERS' NUMBER

Out December 5th—Not least—if last. Our Breeders' interests are paramount. This number is out just at the most opportune time for Xmas advertising.

Plan Now to come into these issues with your brightest and most effective copy.

Our circulation is increasing so rapidly our flat rate of 7c a line is likely to go up after January 1st, 1912. Reserve now the space you want.

Page \$47.04; Half page, \$23.52; Quarter page, \$11.76.

FARM AND DAIRY PETERBORO ONTARIO

'A Paper Farmers swear by'