

Ninth Annual Xmas and Breeders' Number

FARM AND DAIRY & RURAL HOME



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BETTER FARMING
AND CANADIAN
COUNTRY LIFE



OTTAWA ONT.
Dairy and Cattle Sec.
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Toronto, Ont., December 7, 1916



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Enhanced pleasure and satisfaction are attained by owners of a motor equipage embodying efficiency, comfort, beauty and economy.

McLaughlin engineers have perfected a mechanism of maximum efficiency, around the valve-in-head motor.

McLaughlin body types for 1917 are exquisite models of our master coach builders' art.

When miles are measured by the gallon, McLaughlin gasoline economy is proved beyond argument. This fuel saving, with the McLaughlin power, speed and flexibility, has established the McLaughlin valve-in-head motor car as

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A New McLaughlin 7-Passenger Car will be announced in January, 1917.
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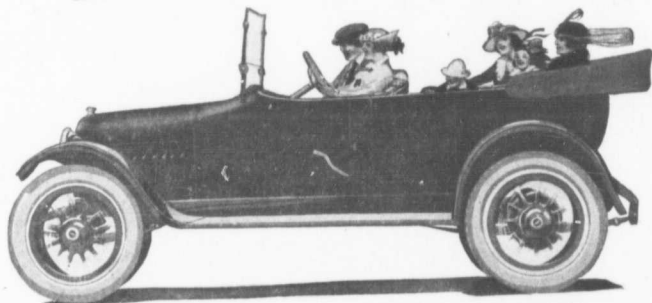
1917 sees McLaughlin motor cars even further in the lead than before. Our new series includes models of Four and Six cylinder cars from \$880.00 up to \$1520.00 in roadster and touring car bodies and a Sedan at \$2350.00.

Model D-4-35—the new **McLaughlin Four**—the challenge in 1917 motor car values—5-passenger touring car.

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The McLaughlin Motor Car Co. Ltd., Oshawa, Ont.

WE
VOT
ME

5-4
stay
wire
rod

6-4
stay
wire
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7-4
in.
Hax
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9-4
stay
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per

9-4
48
No.
5, 6,

9
stay
wire
15 H

Wire Fence Prices to be Advanced Jan. 15th, 1917

DIRECT from FACTORY to FARM PREPAID

MADE IN CANADA



The Sarnia Fence Co., Limited

Sarnia, Ontario



You are well aware that the Sarnia Fence Company brought the price of fence down by their method of selling direct to the farmer for cash, also that they are the last to advance the price.

Owing to the continually advancing price of wire, it is necessary for us to advance the price on all styles of SARNIA FENCE, January 15th, 1917. Remember the date.

But in accordance with our established method we are notifying you before the advance takes place and giving you the opportunity of getting your next year's requirements at the lower price.

DON'T WAIT, ORDER TO-DAY. Enclose remittance with your order and if you do not wish to use the fence immediately we will keep your fence in storage this winter, and ship to you at your convenience up until April 1st, 1917.

By purchasing your fence now you will not only be saving considerable in the cost, but you will assure yourself of getting your fence when you want it. At present there is an indication of a steel famine owing to the large quantities of steel being used for war supplies, and by spring it may be impossible to get fence at any price.

Notice—For Prices Delivered in Maritime Provinces Add 3c Per Rod to the Prices Below.

WE SET THE PRICE, OTHERS DEVOTE THEIR ENERGY TO TRY TO MEET OUR PRICES.

Price in Old Ontario before Jan. 15th	Price in Old Ontario after Jan. 15th
---------------------------------------	--------------------------------------

Sarnia Fence Guarantee

We guarantee our fence to be made from the best galvanized hard steel wire, both stay, line wire and knot, and to be the most perfectly woven fence on the market, and of full government gauge, No. 9 wire.

QUALITY

Sarnia Fence is the best known and most popular fence on the market to-day, due largely to the fact that it has lived up to every claim made for it. The wire used in the manufacture of Sarnia Fence is full government gauge No. 9, and galvanized to the highest possible standard. From the first we have used a most rigid system of inspection, thereby assuring our customers of getting the most perfect fence possible.

Notice

These prices are freight prepaid to any station in Old Ontario on shipments in lots of 200 pounds or over.

Remit direct to The Sarnia Fence Co., Limited, Sarnia, Ont., by Post Office Order, Money Order, or Bank Draft.

We want your order whether for one bale or a carload.

Mail Us Your Order Today

CASH WITH THE ORDER SAVES EXPENSE AND YOU GET THE BENEFIT OF THE SAVING IN THE PRICE.

Price in Old Ontario before Jan. 15th	Price in Old Ontario after Jan. 15th
---------------------------------------	--------------------------------------

- 5-40-0 HORSE AND CATTLE FENCE.** Has 3 line wires, 40 in. high, 5 stays to the rod, all No. 9 Hard steel wire, spacing 10, 10, 10. Weight per rod 1 1/2 lbs. Price per rod.....
- 6-40-0 HORSE AND CATTLE FENCE.** Has 3 line wires, 40 in. high, 5 stays to the rod, all No. 9 Hard steel wire, spacing 7, 7, 8, 9, 9. Weight per rod 1 1/2 lbs. Price per rod.....
- 7-40-0 HORSE, CATTLE AND SHEEP FENCE.** Has 7 line wires, 40 in. high, 9 stays to the rod, all No. 9 Hard steel wire, spacing 5, 6, 7, 10, 11, 11. Weight per rod 1 1/2 lbs. Price per rod.....
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- 8-40 GENERAL STOCK FENCE.** Has 3 line wires, 40 in. high, 12 stays to the rod, all No. 9 Hard steel wire, spacing 4, 5, 4, 4, 4. Weight per rod 10 1/2 lbs. Price per rod.....
- 8-48 GENERAL STOCK FENCE.** Has 3 line wires, 48 in. high, 12 stays to the rod, all No. 9 Hard steel wire, spacing 4, 5, 6, 7, 8, 9, 9. Weight per rod 11 lbs. Price per rod.....
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- 9-48-0S SPECIAL HORSE AND CATTLE FENCE.** Has 3 line wires, 48 inches high, 5 stays to the rod, all No. 9 Hard steel wire. Spacing, 6, 6, 6, 6, 6, 6, 6. Weight per rod, 11 lbs. Price per rod, freight prepaid.....
- 9-48 GENERAL STOCK FENCE.** Has 3 line wires, 48 in. high, 12 stays to the rod, all No. 9 Hard steel wire, spacing 3, 4, 5, 5, 6, 6, 6. Weight per rod 12 lbs. Price per rod, freight prepaid.....

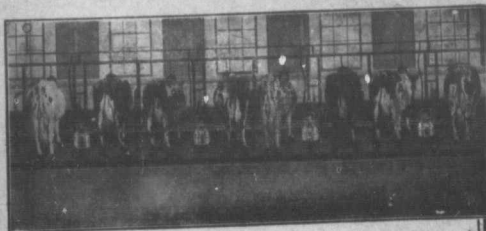
27c	28c
31c	32c
35c	36c
37c	38c
43c	45c
45c	48c
45c	48c
45c	48c
50c	53c

- 10-50 HORSE, CATTLE, SHEEP AND HOG FENCE.** Has 10 line wires, 50 in. high, 12 stays to the rod, all No. 9 Hard steel wire, spacing 3, 3 1/2, 4, 4 1/2, 6, 8, 8, 8. Weight per rod 1 1/2 lbs., per rod.....
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- 18-50 STOCK AND POULTRY FENCE.** Has 18 line wires, 50 in. high, 24 stays to the rod, top and bottom wire No. 11, middle No. 12 hard steel wire, spacing 1 1/2, 1 1/2, 1 1/2, 1 1/2, 1 1/2, 1 1/2, 2, 4, 4, 4, 4, 4. Weight 12 lbs.....
- FENCE ACCESSORIES**
- WALK GATE 3 1/2 x 48.....**
- FARM GATE, 12x48.....**
- FARM GATE, 13x48.....**
- FARM GATE, 14x48.....**
- FARM GATE, 16x48.....**
- STAPLES GALVANIZED, 1 1/2 in. per box of 25 lbs.....**
- BRACE WIRE, No. 9, Soft, per coil 25 lbs.....**
- STRETCHER.** All iron top and bottom, draw very heavy tested chain, extra single wire stretcher and applicator, the best stretcher made at any price.....

55c	58c
56c	60c
\$2 25	\$2 50
4 50	5 00
4 75	5 25
5 00	5 50
5 50	6 00
1 00	1 10
1 00	1 10
9 00	9 00

THE SARNIA FENCE COMPANY, LIMITED

SARNIA, ONTARIO



B-L-K Milkers Save Money

The greatest advantage of Burrell-Laurence-Kennedy Machine MILKING over hand milking is the big saving every year in actual cash. When you add this to the other advantages you can not but admit that milking by the B-L-K method, as one customer puts it, "Has got hand milking beat by a mile," no matter what way you look at it.

Sanitary Milk
Cows Milked Clean
Milking Time Cut in Half
Large Yields

AND

A Big Saving in Labor and Money
are things you can not afford to ignore.

EACH OF THESE FEATURES MEANS

BIGGER DIVIDENDS

FOR YOU

JUST AN INSTANT TO SHOW WHAT ONE MAN IS DOING:

He is taking great pains in the care of the milk and the cows he handled, but he is milking 100 cows in two hours with six machines, operated by two men, and a third to carry the milk. He effects an actual saving of \$1,568.00 per year, with an equipment that cost him \$225.00 complete.

It is impossible for us to tell you more this week, about the B-L-K. What it can do for you in the way of saving labor, money, etc., but if you drop us a card we'll gladly send you literature, giving full details. Get your card and pen now, before the matter slips your memory.

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WE WANT AGENTS IN A FEW UNREPRESENTED DISTRICTS

Meeting the Objections to the Dairy Standards Act

New Regulations Being Fully Discussed—Many Questions Asked—Some Objections Raised—How They Are Being Met

As one after another of the conventions of the Dairy Farmers' Association of Eastern Ontario is held it becomes more and more evident that on the whole, the Dairy Standards Act, requiring that the milk at cheese factories be paid for on a quality basis, is being well received throughout Eastern Ontario. Of course all are not satisfied with its provisions. At almost every meeting, some are present to voice their objections; some being outspoken in their opposition. Although the objections that are advanced are not always justified and are sometimes based more on prejudice than on a desire to treat the matter fairly and squarely and to judge the new dairy act upon its merits. In discussing the act and in giving the results of the investigations that have been held regarding the comparative merits of high and low testin; milk for cheese making purposes, the instructors and lecturers have given evidence of a keen desire to state the matter

that duplicates tests may be run off in case a patron is dissatisfied with his return. He may be given a few days in which to request that another test be made.

Q.—What right has the government to force such a measure upon the patrons of cheese factories without being asked to do so by the patrons?

A.—There is no way of finding out what the majority of patrons want. That would require a referendum and so far the only referendum we have had in the province has been on the temperance question. The legislature believed that the majority of patrons would welcome such a measure and the act was passed the same day. As all other laws are, except that it had the unanimous approval of both sides of the legislature.

Q.—If the average test of milk received at factories is unsatisfactory, why can it not be kept up or raised by educating the patron?

A.—The government has spent thousands of dollars in educational work along this line and instead of

Cheese Made From 100-lb. Lots of Milk of Varying Tests.

Milk Testing 5.5%	Fat Made 13%	lbs. Cheese, Worth \$2.25
Milk Testing 4.5%	Fat Made 11%	lbs. Cheese, Worth 2.10
Milk Testing 4.0%	Fat Made 10%	lbs. Cheese, Worth 1.95
Milk Testing 3.5%	Fat Made 8%	lbs. Cheese, Worth 1.75

fairly before those in attendance at the conventions and to welcome an open and free discussion of the questions raised by the dairy legislation. Every man is given a fair hearing and any questions asked, or any objections raised are discussed in a frank and considerate manner. Such a fair presentation of the case is having an appreciable effect in overcoming the opposition to the Act that has existed in some sections, so that at several of the meetings, those in attendance have voluntarily passed resolutions favoring the new regulations.

Some Objections and Their Answers. The meeting at Stirling in Hastings County, on Nov. 24, was notable in that a lengthy discussion took place regarding the merits of the Dairy Standards Act. It was representative of the meetings in which those opposed to the Act are outspoken in voicing their sentiments. The questions and objections raised were answered satisfactorily to the majority in attendance and as has been the case at several of the meetings, the student swung distinctly toward the side of the new Dairy Act. The following questions and answers, as gleaned from the notebook of an editor of Farm and Dairy who was present to report the proceedings, are fair and representative of the questions asked and of the answers given at the various conventions:

Q.—What will it cost a factory to install the apparatus necessary for conducting the test?

A.—Where there are 50 patrons or more, a steam turbine machine and two sets of bottles will be required. This will cost about \$50, or say one dollar for each patron. It would be wise to secure two sets of bottles so

showing improvement, milk tests lower on the average than it did 20 years ago. It is of no use to tell a farmer to do as he and to pay him for doing another. The pooling system favors the production of low testing milk, because a low test and a large milk flow tend to go together. The pooling system has limited against the educational work and rendered it of no avail.

Q.—Will not the cost of conducting the tests be out of all proportion to the benefit received?

A.—The testing will be done without direct cost to the patrons. To test the milk at the factories, would cost probably 15 cents for each patron a month, which for the factory is an expense worth only amount to a dollar or so, even if the factories had to defray the cost.

Q.—Was not one object of the act to give employment to more men?

A.—The instructors who do the testing and where they cannot cover the work, men will be employed to assist them. It will perhaps take 10 men in addition to the instructors now on the staff, but those who are familiar with the situation know that instructors are not so well paid that the government is besieged with men looking for jobs as instructors to such an extent that they have to make provision for them. The present situation regarding qualified cheese-makers is sufficient answer to a question.

Q.—If payment by test is such a good thing for patrons, why did we not hear of it years ago?

A.—We did hear of it. The Babcock test was first introduced about 20 years ago and promised soon to be installed in almost every factory. (Continued on page 35.)

Xmas Comes But Once a Year

And with it the Heaviest
Buying Season

Our dairy farmers have been prosperous, and now, at Xmas, they are in the best mood to buy. Surely they won't overlook you when making their selections. No, certainly not, if you do your part—keep your announcement before them.

Remember, we still have two issues to appear before the "25th" in which Xmas trade can be appealed to for advantage.

Reserve your space early to secure good placing.

Advertising Dept.

FARM & DAIRY, PETERBORO, ONT.



FARM AND DAIRY & RURAL HOME



We Welcome Practical Progressive Ideas

Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land. — Lord Chatham

VOL. XXXV

TORONTO, ONT., DECEMBER 7, 1916

No. 48

Relationship of Type to Production in Dairy Cows

The Points on the Modern Score Card are all Commonly Found Amongst Economical Producers

THE evolution of the dairy cow from the small, shaggy, coarse animal of centuries ago, to the large animal of the present with her capacity for enormous production, has not been the result of chance, but represents the careful work of cattle breeders for many centuries in domesticating, in better feeding and in selection for more size, type and quality. The great demand for increased production in the dairy herds has caused this evolution.

The Change in Show Ring Standards.

There is a common impression amongst farmers that there are two types of cattle in all breeds, namely, show type and production type, and that these types are radically different. Unfortunately, in the history of many of the modern dairy breeds such, in the past, was true. For example, the Ayrshire cattle were so carefully selected and bred for beautiful lines, long, level udders, and other fancy points that these desirable characteristics were carried to extremes, at the expense of other and more essential characteristics. One fault of the show Ayrshire developed through this course of selection was an udder so extremely shallow that it lacked capacity and was almost invariably accompanied by short teats. Another fault was the beef tendencies due to the general compactness and smoothness desired in the show ring. However, in recent years, for this as well as for other breeds, show-ring standards have rapidly changed. Although the gracefulness and the beauty of the breed have not been forgotten, more openness and more dairy characteristics have been introduced. The lessons from the history of the Ayrshire have been well learned by breeders of all modern breeds of dairy cattle, and each year we see more uniformly, quality and smoothness, together with accompanying style and character introduced into all rings of dairy cattle, while at the same time both breeders and judges guard against beefiness, short teats and similar faults.

It is my impression that under the intelligent judge the producing type in its best form is now our best show type. It is true that there are a few large, rough, plain cows with great production records, but these are the exception and not the rule. A careful study of the highest and most economical producers of milk and butterfat in all modern dairy breeds proves this conclusively. Beauty of form may go with the type of the highest producers, hence animals combining beauty and greatest production are the most valuable and in greatest demand. Beauty of form—in other words, show type—combines a graceful conformation of the type representing most economical production with greatest quality. It is impossible to review a scale of points, but a brief consideration of the essentials from a viewpoint of both type and production is herewith given.


E. S. ARCHIBALD, B.A., B.S.A.,
Dominion Animal Husbandman.

There is a distinct correlation between the various parts of the dairy cow, an example of which is seen in the cow with a large musle being usually a good feeder. An efficient judge works on this principle of correlation in carefully analyzing each animal, and must not be a faddist or lay too much stress on any single character. Considering briefly the most essential points in the dairy cow, one naturally starts with the udder development. Among the highest producers of any of

the dairy breeds a large percentage of cows have large udders as to capacity, but at the same time udders which are strongly attached to the body, lacking meatiness and of great flexibility and quality. Size of udder always goes with great production, but the pendulous, meaty or ill balanced udder is never found on the cow which is capable of making the greatest and most economical production of milk and fat. The quarters and udder must be even and the teats of good size and well placed. It is quite essential that the udder should have more depth than has for many years been specified by the Ayrshire enthusiasts in order that there may be greater capacity for milk and the accompanying larger teats. The milk veins must be long, tortuous and contain numerous and large milk wells. These are common standards of the showing, and are almost invariably found amongst the best producing cows. Again, there is a distinct relationship between the straightness, width and length of the hindquarters of the cow and the length, width and levelness of the udder. Almost always drooping quarters are accompanied by udders which are badly tilted forward. The capacity of the cow for feed is as essential as her capacity of udder for the manufacturing of this feed into milk, considering the enormous amount of work which a cow must perform in order to manufacture ten tons or more of feed a year into the finished product. The cow with a long, well sprung, open formation of rib almost invariably is the cow which is the most economical consumer and producer of feed and, if the udder development is proportionate, is the cow which is most persistent in her milk flow. Again, the capacity of the forequarters of the cow must be such that the heart and lungs may have ample development for the production of sufficient blood to perform the normal functions of digestion of foods and manufacture of milk. These three great essentials of the dairy cow, namely, capacity of udder, capacity for feed, and constitution, naturally evolve the wedge-shaped type of cow, which is quite unlike beef type. The general straightness of top line, the depth increasing from front to rear, the width at the shoulder points increasing to greater width of barrel, all tend to produce the three wedges commonly sought for by the judges of dairy cattle, and these wedges are found in all the cows which rank amongst our world's greatest producers.

Space prevents going into details as to quality of the cow, which must be of the same efficiency, as conformation in order that she may be the most economical machine. However, all points which are commonly found on the modern score card have been found commonly amongst our most economical producing dairy cows. Because a cow

(Continued on page 18.)



Christmas Greetings

WE approach the season of Christmas rejoicing, when greetings of affection and friendship are in order, let us bear in mind that it is not the words of greeting, but the spirit in which they are uttered that has significance. Let us not forget that there are other days in the year besides Christmas for an encouraging word, a friendly greeting and a sympathetic handicap. If Christmas is better than any other day in the year, it is because the feeling of fellowship belongs to it. Why not soften the asperities of life, extend the helping hand, and give the word of comfort and good cheer on every fitting occasion? How much happier the world would be if all sought to have the Christmas spirit abide with us always! The Christmas season with its holy memories, filled with the spirit of good cheer, appears to old and young alike. We cannot forget it if we would, and we would not if we could. It fills our minds and hearts with sweet and generous thoughts, and tends to make us better friends and better citizens. If it were blotted out, that which is best in the year would be lost to us. This is the season when our chief happiness consists in giving happiness to others.



Thrifty, Rugged Young Dairy Females, Carrying the Blood of a Good Sire, photographed under Ordinary Pasture Field Conditions. Eighteen of the young daughters of Sir Korndyke Boon, on the farm of their owner, A. C. Hallman, Waterloo Co., Ont.

What the Famous Bulls of History Have Done for Their Breeds

The Power to Transmit Production Capacity to Both Sexes—the Final Test of a Dairy Sire

IN attempting to improve, or even to maintain, the standard of a herd of either dairy or beef cattle, the important influence exerted by the sire used forces itself upon the attention of the intelligent breeder. Examples of herds which have sprung into prominence and of others that have come to grief through the use of certain individual bulls are familiar to all stockmen who have taken more than a local interest in their breed. It is, however, only by the study of the history of a breed and of the records of its representatives in the show ring and as producers, down through the years to the present day, that the predominating importance of the truly great sires can be properly appreciated.

The Famous Bulls of History.

The early improvement of our beef breeds was effected in each case by a comparatively few men whose achievements have been carefully and accurately recorded. Naturally, therefore, some of the most outstanding illustrations of the far-reaching influence of prepotent bulls are found in Shorthorn, Hereford and Aberdeen Angus histories. To refer even briefly to the most important would require pages and would be outside the purpose of this article. It is, however, of interest to note that, in each of these three breeds, one or two bulls are practically the foundation sires. To all Shorthorn breeders, the name of Hubback, calved in 1777, is familiar. His use by Charles Colling made such an impression on the then existing class of Shorthorn cattle that Hubback has sometimes been referred to as the foundation sire of the Shorthorn breed. The intensely inbred Favorite (252), calved 1793, a lineal descendant of Hubback, occupies an equally prominent place in Shorthorn history. His get were the most famous Shorthorns of their time, and his immediate descendants constitute a large percentage of the foundation stock of the breed.

In the case of Aberdeen-Angus cattle, the bull Panmure (51), calved 1840, occupies a place similar to that of Hubback among Shorthorns, while the bull, Young Viscount (736), 381, calved 1875, is entitled to fame as one of the foundation sires of American Aberdeen-Angus cattle, owing to the fact that he and his sons sired hundreds of animals out of a total of some five thousand two hundred registered in Volume 1 of the American Angus herd book. Among Herefords, the John Hower bull, Sovereign (404), 221, calved 1820, and used in at least four different and prominent herds, may perhaps be considered the foundation sire. The great show bull, Sir David (349), 68,

R. S. HAMER, Chief of Cattle Division, Ottawa.

calved 1845, one of the most prepotent sires of Hereford history, was a grandson of Sovereign. Some of the choicest blood lines of American Hereford stock trace directly to Sir David, and he has been referred to by his admirers as one of the most influential sires which has existed in any of our beef breeds. Lord Wilton (4740), 4057, long considered the greatest sire in Hereford history, traces back to Sir David through both his sire and his dam.

To Canadian Ayrshire breeders, the name of the Scotch Cock-a-Bendie will go down in history as the bull which contributed perhaps more than any other individual sire to the fixing of the present-day Ayrshire type, while to Holstein-Friesian breeders in America the names of Hengerveld DeKol, DeKol Ind's Butter Boy 3rd, Pieterje Hengerveld's Count DeKol, Paul Deete DeKol, Pontiac Korndyke, and a few others represent the foundation upon which the popularity of the breed has been built in United States and in Canada.

It is a noteworthy fact that all great breeders have made substantial progress only through the impetus given by the use of certain individual

Scotch topped Shorthorns in Canada and in the United States to-day may be traced back to him. Similar instances are found in the work of practically all of the great improvers of the various breeds of cattle and the principle is being illustrated on a smaller scale each year in the herds of breeders of to-day.

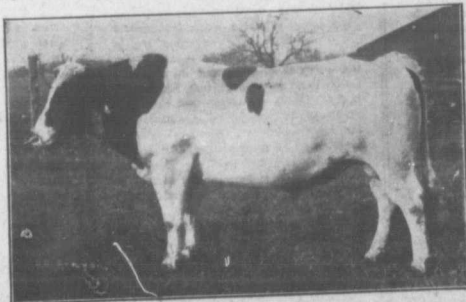
The Influence of Famous Bulls.

In considering the influence of famous bulls of history, a principle which is of great significance to the practical breeder is illustrated time and again through the fact that, in many instances, they undoubtedly owed to their maternal ancestors, the qualities which they transmitted to their descendants, with resulting fame to themselves. A somewhat extreme illustration of this is found in the bull Duke of Northumberland (1940), calved 1825. The sire of this bull, Belvedere (1706), being very closely inbred, traced back through several lines to the cow Princess, who was in no case more than four generations removed from him. The dam of Duke of Northumberland was the famous Duchess 34th, who carried not only straight Duchess blood on the maternal side, but was also sired by Belvedere (1706). Thomas Bates

considered Duke of Northumberland his crowning achievement as a show bull, and also as a breeder, and he and his sire Belvedere undoubtedly contributed very largely to the fame of the Bates' strain of Shorthorns, and particularly to the quality of his celebrated Duchesses. While back of the female ancestry of both of these bulls through practically all lines, is found the bull Favorite (252), the fact remains that their qualities have, with justice, been attributed to the outstanding cows whose blood they combined and represented in such concentrated form. Shorthorn breeders have always placed great emphasis on the maternal ancestry not only of their bulls, but of their females as well, as instanced by the long established tribes traced back through the female side in each case to some noted cow.

Naturally, however, it is through the male progeny that the good qualities of an outstanding cow will be most rapidly and widely disseminated with resulting benefit to the breed, provided the inheritance is strong enough to be transmitted. In recent years, dairy breeders have been giving an increasing amount of attention to the female ancestry of sires purchased and since the inauguration of official tests and advanced registration, they have had the advantage of guaranteed figures of production upon which to base their judgment.

(Continued on page 10.)



Sir Korndyke Boon, the Herd Sire of A. C. Hallman, Waterloo Co., Ont. This grand Bull has never been shown. His owner is content to prove him through the merits of his progeny.

bulls whose blood seemed to nick to advantage with that already carried by their herds. For instance, Angus Cruikshanks, the greatest of Scotland's breeders of Shorthorns, worked conscientiously for twenty-five years on a big scale before his breeding operations were placed on a sure footing through the use of the famous Champion of England (17526), calved in 1859. The descendants of this bull, probably the greatest Shorthorn Scotland has ever known, firmly established Cruikshank's reputation and thousands of our

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Dairy Herds at the O.A.C.—How They Are Being Improved

Holsteins Reach a High Average of Production—Ayrshires Progressing Rapidly—Jersey Herds Being Strengthened

The dairy herd at the Ontario Agricultural College is maintained for a two-fold purpose: firstly, to provide suitable animals of the various dairy breeds for giving instruction to the students in the judging and choosing of dairy cattle, and, secondly, to provide animals for use in conducting investigations in the different phases of breeding, feeding and management of dairy cattle, which is an essential part of the work of an institution of this kind. When the above purposes are fulfilled, the dairy herd occupies the same position in the organization of the Experimental Farm that the average dairy herd occupies on the average farm, that is, to turn into a marketable product at a profit the ordinary farm-grown feeds as well as those usually purchased by the average dairy farmer.

The dairy herd consists on the average of about ninety head throughout the year. These consist of Holsteins, Ayrshires, Jerseys, Dairy Shorthorns, and one or two Grades. To give each of these breeds a representation, therefore, there is not really a very large herd of any one breed. To be precise, there are usually about thirty Holstein females, and from sixteen to twenty of each of the other breeds, in addition to the herd bulls and a few bull calves usually on hand.

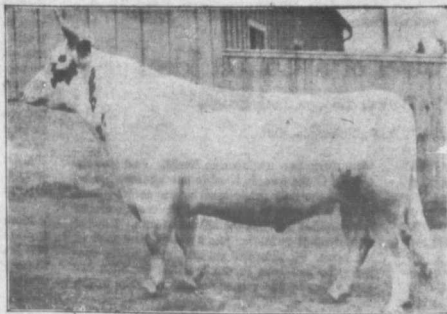
College-Bred Holsteins.

The Holstein herd is practically all of College breeding, and the milk and fat records that have been attained from this breed during the past few years, amply justify the care and skill with which the herd has been built up during the past ten or twelve years.

The quality of high production in the herd can be attributed largely to the purchase in 1907 of the well-known bull, Johanna Rue 4th's Lad, 2105, and the great breeding cow Totilla DeKol Pieterte 3445, from the herd of Matt. Richardson, of Caledonia. Although an old bull at the time, Johanna Rue 4th's Lad was used successfully for four or five years, and now practically all the females in the herd are his daughters and grand-daughters. This bull now stands near the top in both the R. O. P. and R. O. M. in regard to high producing daughters and valuable breeding sons, and it is interesting to note that every one of his daughters in the R. O. P. has a yearly average of about 3.6 per cent, which is 1.3 per cent higher than the average of the breed in the R. O. P. annals. This same characteristic of the high butter fat content is noticeable in those of his daughters in the college herd which averaged slightly better than

A. LEITCH, B. S. A.,
Farm Manager, Ontario Agricultural College.

3.6 per cent. in both R. O. P. and private tests. Following this bull there was used for two years a son of the noted cow, Lakeview Rattler, who has sired some of the really good animals in the herd. One of these in particular, Molly Roe Rattler, out of a daughter of Johanna Rue 4th's Lad, has made the following fine records as a 3-year-old on twice-a-day milking, in R. O. P.: Milk, 16,975 lbs.; butter fat, 640 lbs.; butter, 800 lbs., and dropped two calves in less than thirteen months. In R. O. M. she made 24.50 lbs. butter in seven days, under the same conditions. This year in



Hobland Surprise (Imp.)

At the Head of the Ayrshire Herd at the Ontario Agricultural College.

her 4-year-old form she is performing nearly 30 per cent. better under similar conditions.

During the year ending August 31st, 1916 the thirteen cows of the herd, 3-year-old and over, one of which had but three teats, and one was fourteen years old, produced an average of 15,072 lbs. of milk and 551 lbs. fat, which is 100 lbs. fat and 600 lbs. milk more than the 123 mature Holstein cows listed in Vol. 7 of the R. O. P. report; nor was this result obtained by excessive or extravagant feeding, because the average profit per cow, over cost of feed, which includes also the cost of feeding until the next calving, was \$103.21. Moreover, with the exception of two of these cows, all produced two calves within fourteen months.

The best record made by any one cow was that of Young Springwood, a five-year-old Holstein, which gave 29,110 lbs. milk and 821 lbs. fat in 365 days. This cow was milked only twice a day

during the year, and this amount of milk and fat is believed to constitute a world's record for production under these conditions.

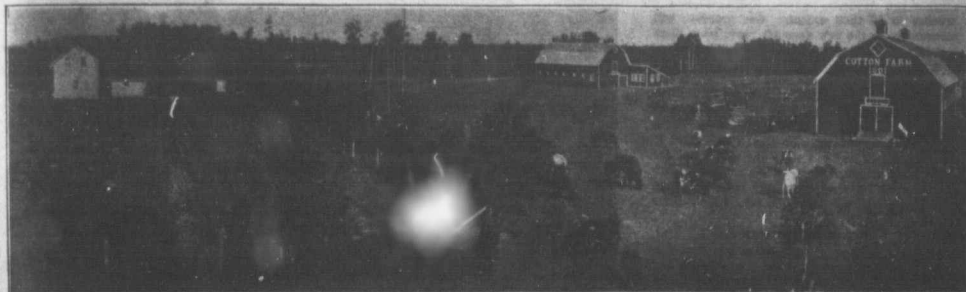
A Promising Ayrshire Herd.

The Ayrshire herd at the College has not yet built itself up to the same high standard of production as the Holsteins, but is making great progress every year. About two years ago a great improvement was effected by the purchase of three imported young females and one of the best sons of Hobland Masterpiece. Shortly afterward the most unlikeliest members of the herd of this breed were disposed of, and with the new animals and the best of the old herd, a new start was made. The improvement during the past few months has been marked, and the writer expects during the next three or four months that all the cows of over two-years-old will have reached the average of over 10,000 lbs. milk and 400 lbs. fat in the R. O. P. test. This production, combined with that well-known breed characteristic of producing milk and butter cheaply, is an inkling that in the near future the Ayrshires will make their Holstein sisters in the same herd look to their laurels. As an indication of the quality of the Ayrshires, one of the largest and most discriminating breeders has recently selected a bull from the College to head his herd.

Jersey Herd Strengthened.

Regarding the Jerseys in the herd, the same remarks apply as were made of the Ayrshires. Three years ago three fine imported heifers were added to the then rather small representation of the breed. Until the past year, these were rather unfortunate in getting few living heifer calves, so that it is only lately that they have helped add to the numbers of the Jersey herd. However, there was being used an excellent bull, Brampton Merger, from a cow that held the Canadian record of the breed for milk at two years old. He had sired some fine heifer calves, the oldest of which has made a very creditable record as a two-year-old. These heifers, with the imported cows and one or two lately added form the nucleus of a very promising Jersey herd. Two cows have within the past few months finished records of over 400 lbs. fat and 8,000 lbs. milk, while two more are making promise of better production still when their R. O. P. year is up. There has just been purchased as a herd sire, a fine young bull sired by Viola's Bright Prince, and out of an imported 3-year-old with an R. O. P.

(Continued on page 14.)



Though flanked on every side by trees the general appearance of this place makes its location unmistakable. In the Park Country of Western Canada.



Saskatchewan Believes in the Dairy Cow. Ayrshire, Holsteins and Jerseys at the Saskatoon Agricultural College.

The Guiding Power of a Correct Ideal

Its Selection is the First Duty of the Live Stock Breeder

F. E. ELLIS, B. S. A., Halton Co., Ont.

THE call to-day is for more and better breeders of live stock. The past couple of decades have witnessed a marked improvement in the live stock of the Dominion of Canada. Credit for this improvement, which has extended to all classes of live stock—horses, cattle, sheep and swine—must be divided between the importers or dealers on the one hand and the breeder on the other. In some lines, notably horses, the importer probably deserves more credit than our Canadian breeder for the improvement effected. Even in the case of dairy cattle, where the work of the breeders is of first importance, the importer has exercised a tremendous influence. In a couple of dairy breeds that have been with us for almost 70 years, imported animals still claim the chief awards in the show-ring, and, in not a few cases, at the stall as well. But from now on, the importance of the importer as a factor in live stock improvement, must decline, and future progress in Canada will rest more and more with the breeders on this side of the water. War, grim master of the present, will leave in his trail influences that threaten to change many well established customs and practices; for instance, going to the older countries for the best pure-bred breeding stock. It does not require much foresight to see that the natural increase of European herds will be required for many long years to replace the destruction of European live stock wrought by war. American importers will find it increasingly difficult to secure shipments, and dealers who have heretofore made regular trips to Great Britain and France, will now turn to the home breeder to fill their orders. Our breeders will measure up to the new demands made upon them, just in proportion as they have the guiding power of a correct ideal.

An ideal is the first essential to success in any field. Without it nothing worth while can be accomplished. An ideal is to the breeder what the rudder is to the vessel; without it he would be a helpless wanderer. An ideal firmly fixed is the only power that can carry the young breeder through the many discouragements and disappointments which he must inevitably meet and lead him on to the mount called Success. Let me illustrate:

The Case Illustrated.

A few years ago, during one of my then frequent visits to Oxford Co., Ont., I watched, along with a well-known fancier of the Holstein, the placings at a local show. Practically all of the competing animals in the black and white section

were from two neighboring herds. And practically all of the awards went to one of these herds; in fact, the only prizes won by the inferior herd of the two, were in classes that the more successful exhibitor had not the animals to fill. I asked my friend if Exhibitor No. 2 was a new man in the game. He informed me that, quite to the contrary, he had been in the breeding business for over a decade, and was one of the first men in the

neighborhood to own a registered Holsteins. Then he gave me an outline of the development of the two herds.

"Both of these herds," said he, "were established about the same time. It must be a dozen years at least since Ted and Alec, the two exhibitors at this show, came over to my farm to get their foundation stock. They came together and went away with some real nice females, just a few head each and of equally good quality. They started even in the breeding business—until they bought their first bulls. The successful man here to-day, Ted we call him, paid a right good price for the best bull calf in a neighboring herd. Alec took a cheaper, and, therefore, a poorer animal, from the same herd. The two have followed the same plan ever since. Ted had worked consistently for his ideal; Alec apparently has never had an ideal. Any registered bull was good enough if cheap enough, and he is to-day reaping the fruits of his misguided economy."

During the years that the writer was connected with the editorial department of Farm and Dairy, I visited several scores of pure-bred dairy herds, and met many Ted's and more Alec's. It is a fact, as regrettable as it is true, that a large majority of owners of registered stock in Canada are not worthy of the name of breeders. Their work is not constructive, and their herds are steadily deteriorating in their hands. Almost every neighborhood furnishes its quota of herds in which the old foundation cows are the best animals owned. Wherein lies the trouble? Merely the lack of a clear ideal.

A Few Guiding Principles.

More pleasing is the impression left with me by my associations with the great and successful in the breeding world; and without an exception these men have been breeders with an ideal. Most

(Continued on page 19.)

Community Breeding in Successful Operation

How Six Breeders Cooperate in Securing Good Bulls

R. F. HICKS, York Co., Ont.

DURING the 15 years that have elapsed since we entered the ranks of Holstein breeders the bull problem has been ever present in our plans for the improvement and advancement of our herd. About 16 or 17 years ago Alta Posch was making her world's record of 27 lbs. butter in seven days as a two-year-old. Her owner, Mr. Rettle, offered her bull calf at a very moderate figure, and strongly advised us to purchase him

for our herd sire, but we delayed action long enough to permit another to step in and secure him. However, we are sometimes permitted to profit by our mistakes. In the fulness of time the 20-lb. cow arrived, and with that event, how to secure the son of a 20-lb. cow for a herd sire was very often present in our meditations. The solution, and apparently only solution, was found about six years ago, when jointly with five neigh-



British Columbia Breeds Some Magnificent Horses. Pure Bred Clydesdale Mare and Colt at Colony Farm, Essondale, B. C.

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A String of Oddly Marked Horses on an English Estate. They include Both Piebalds and Skewbalds.

bor breeders, Sir Lyons, a son of King Segis and that very well known cow Blanche Lyons DeKol, with a 33-lb. record, was secured. We pooled the amount that each was willing or could afford to pay for a herd sire with the result that a sufficient amount to secure this bull was secured without any special effort or financial strain. Thus, instead of having six \$250 bulls in the locality, we had one \$1,500 bull, and instead of six neighbor breeders following in his attitude towards his neighbor breeders, all were of necessity going to a considerable extent in the same direction. As a result, some disagreeable features of competition often met with were eliminated, and the community spirit developed to the mutual benefit of all concerned.

Six Years' Satisfaction.

In the adoption of this we were building even better than we had supposed, as all parties concerned will readily testify after a trial of some six years. There are no serious obstacles in the way of a similar scheme being operated in any locality where a few breeders are located sufficiently near to each other for convenience, and when all are prepared to play the game fairly. When another sire was required to mate with the daughters of Sir Lyons, we had sufficient confidence in cooperation to secure the very best bull available at the time, and May Echo Champion was purchased, he being a full brother to the great May Echo Sylvia, whose record of 153 lbs. milk in 24 hours, 1,005 lbs. in seven days, and her enormous production of 12,899 lbs. milk in 100 days, together with over 41 lbs. butter in seven days, fairly places her in a class by herself. Another full sister, Lawn Crest May Echo Poach, was good enough to come down with 33 lbs. butter and over 700 lbs. milk in seven days. The dam of May Echo Champion is a 23-lb. cow, and the grand dam the great May Echo, with over 31 lbs. butter. Each of these have exceeded 700 lbs. milk in seven days, their average being far in excess of that amount.

Would it be reasonable to expect a breeder under ordinary circumstances to be able to secure a bull of the standing of May Echo Champion? Not often. It is possible that the success of cooperation has had some outside influence for we learn that a neighboring group of breeders living in the same county have put in a son of one of the daughters of May Echo Sylvia at a figure sufficient nearly to secure a real submarine or at least a couple of airships. Following upon this, other interests have secured the services of a son of May Echo Sylvia, a bull that was sold at public auction at the Arvonale sale in 1915 for \$4,500. Is it too much to expect that this choice of three bulls, a son, a full brother and a grandson of the world's greatest cow, May Echo Sylvia, all in service in the same county, and used as herd sires almost exclusively in about 15 of the leading herds, will produce results that cannot be yet estimated. In addition to all this, with such a number of local breeders following the same line of operations to a very great extent, what a stimulus is furnished for friendly rivalry and all round good fellowship.

(Continued on page 14.)

Assisting the Sheep Industry in Quebec

The Extension Work in Sheep Husbandry at Macdonald College

A. A. MacMillan, B. S. A., in Charge of Sheep Husbandry.

DURING the past year, extension work in sheep husbandry at Macdonald College has included much new enterprise in addition to furthering such work as had already been inaugurated. The policy of establishing demonstration flocks of Cheviot sheep, which was commenced in 1913, has been made much more extensive and far-reaching by the further importation last fall of sixty-four pure-bred ewes and six rams. The annual return of ewe lambs from flocks already established, together with the new importation, has made it possible to establish twelve flocks, comprising nine ewes and a ram, in various parts of the province. These flocks have been established under conditions that insure a return of an increase over the original flock, so that the establishing of new flocks from the original stock may be continued from year to year. The demonstration flock offers a fine medium for demonstrating improved methods of breeding, housing, feeding and management, besides acting as distributing centres for pure-bred rams, and thereby having a direct influence on flocks in the immediate neighborhood. Flock improvement through the Cheviot has been confined largely to the rougher and more broken sections of the province, where hardiness and activity are desirable characteristics.

The demonstration flocks are handled under average farm conditions. The ewes are housed in cheap, dry, cool, airy buildings. They are allowed abundance of exercise, and are fed mainly on roughage in the form of mixed hay or clover,

supplemented with cereal straws, such as pea, bean and oat. Grain is fed sparingly, except previous to and after lambing. Roots, where available, are fed throughout the entire winter, the amount being reduced to one or two pounds as lambing time approaches. The ewes are bred to lamb in April or early in May, so that the lambs are from two to three weeks of age before going to pasture. Under this system of management the annual cost of maintenance is low, and good results are obtained.

A Profit of \$6.38 a Ewe.

The ewes have averaged a lamb each, and have netted a good profit after charging them up with winter feed and pasture. The average cost of maintaining a ewe throughout the year was \$2.73, while the average return a ewe was \$9.11, giving a net profit of \$6.38 each. In all cases feeds are charged and wool and lambs are credited at market prices in the districts in which the flocks are established.

A small flock of grade ewes are usually kept in conjunction with the pure-bred flocks, and are bred to the Cheviot ram. A number of pure-bred rams have also been placed with grade flocks, so that farmers might ascertain the value of using a pure-bred sire on grade ewes. Through these channels the blood lines of sheep in certain sections are being definitely influenced, and at the same time sheep raising is being given an impetus through this tangible evidence of outside effort.

Much effort has been directed towards enlarging, organizing and assisting the nine Wool Growers' and Sheep Breeders' Associations now operating in the province. After two and three years of successful operation the membership of these associations has increased to 1,617. They have had a direct effect on flock improvement, and have created a much greater interest in sheep raising. As a result of improved methods in breeding, management and marketing, members have secured a higher average price for the products which they have offered for sale.

The associations in Quebec are organized on a county basis, but under some con-

(Continued on page 17.)



One of the Demonstration Cheviot Flocks in Quebec.



A Suitable Pen for a Farm Flock.

Size 20 x 50 houses 10 ewes; 20 x 25 houses 25 ewes; cost \$250 to \$400.

FREE! FREE! FREE!

TO FARMERS AND FARMERS' SONS

Short Winter Courses at the Ontario Agricultural College, Guelph

The only expense to you is board at reasonable rates while in Guelph and reduced railway fare.

Stock and Seed Judging

January 9th (2 weeks). Judging Horses, Sheep, Cattle and Swine, Slaughter tests, lectures on Breeding, Feeding, etc. Judging grains and seed of other farm crops; selection, germination, purity, etc.

Fruit and Vegetable Growing

January 9th (6 weeks). Varieties, Nursery Stock, Spraying, Fertilizers, Pruning, Marketing, etc. Vegetable Gardening, Green House Crops, Floriculture. A week's course in apple packing follows the Horticulture Course.

Poultry Raising

January 9th (4 weeks). Poultry Houses, Breeding and Mating, Judging, Feeding, Winter Eggs, Fattening, Dressing, Marketing, etc.

Dairying

January 2nd (Three Months' Course in Factory and Farm Dairying). Summer Course in Butter and Cheese Making. Courses in Cow Testing and Ice Cream Making.

Bee Keeping

January 9th (3 weeks). Care and Management, Swarming, Queen Rearing, Diseases and Treatment, Quality of Honey, Marketing, etc.

Business and Marketing

January 9th (2 weeks). Evening lectures on markets, banking, bookkeeping, etc.

For full particulars write for our Short Course Calendar, which will be mailed on request.

G. C. CREELMAN, President.

What Famous Bulls of History Have Done for Their Breeds

(Continued from page 6.)

It is a self-evident fact that the sire placed at the head of a pure bred herd must prove to be a getter of high class females before he can be considered a success. This is true of all breeds, but has possibly more particular force in the case of the dairy breeds. While instances could be quoted from the histories of all breeds to indicate the important part taken by noted sires in the improvement of the females of the breed and in the establishment of famous tribes as traced through their daughters, it may perhaps be of more particular interest here to refer to a few of the more prominent dairy bulls of recent years, whose value has already been demonstrated in the official records of their female progeny.

Renowned Holstein Bulls.

Owing to the wide-spread popularity of the Record of Performance test and of the Record of Merit test among Holstein-Priesian breeders in both Canada and the United States, and to the up-to-date manner in which their breed associations are keeping a record of the progeny of their bulls in a simple manner to pick out the names of Holstein sires which have undoubtedly contributed greatly to the improvement of the type and of the production capacity of the females of the herds in which they have been used. Further, the commendable practice, which has also been adopted by other dairy breeds, of giving advanced registration to bulls when a certain number of their progeny qualify for advanced registration, automatically gives recognition to sires which have proved their ability to get high producing females. To name only a few of the many Holstein bulls whose progeny have made names for themselves in Canada in recent years, such sires as Dutchland Colantha Sir Abbecker No. 7140, Inka Sylvia Beetsa Poesch No. 5563, Sir Canary Meethide No. 5218, Prince Aagrie Meethide No. 8482, might be quoted. Each of these bulls has a large number of progeny qualified in both the Record of Merit and Record of Performances and in addition, they get show remarkably good type and unusual uniformity. Inka Sylvia Beetsa Poesch, the sire of many heavy producers, would be entitled to fame solely as the sire of May Echo Sylvia, Canada's first 40-lb. cow, and the world's champion milk producer for all periods from one to one hundred days. It is worth while noting also, that the dams of all of these bulls were exceptionally good cows, as evidenced by their official records of production, except in the case of Sir Canary Meethide, whose dam was an untested, cow, sire, however, by a bull with twenty-eight tested daughters. The dam of Prince Aagrie Meethide was twice champion at the Guelph Winter Fair.

Reference might also be made to some of the great American Holstein bulls of recent years, such as Colantha Johanna Lad No. 5243, King of the Pontiacs No. 39057, and King Segis No. 26168, all of whom have several sons standing at the head of Canadian herds. Pages might be written regarding the achievements of the progeny and the immediate descendants of these three great bulls alone. Standing as they have, at the head of large herds of high class cows, they have of course had unusual opportunities to make their influence felt. Colantha Johanna Lad was sire by the grand champion bull at the World's Fair at St. Louis, and in his dam was in her day, World's champion for yearly production. Selected out of the mass of official evidence regarding his ability to transmit the qualities which

he inherited, the fact may be quoted that, in one year, the first ten of his daughters tested, averaged nearly twenty thousand pounds of milk at an average age of a little over three years. King of the Pontiacs sprung sides, has more tested daughters (185) and also more 30-lb daughters (17) than any other bull. He is the only bull in the world with over 40-lb. daughters. King Segis, whose dam was at one time the world's champion seven-day butter producer, has eighty-six tested daughters and over nine hundred officially tested granddaughters, while his grandsons and great-grandsons are practically all siring heavy producers. In the records of such bulls as these we have a complete demonstration of the far-reaching influence of sire of get progeny when they are given a full opportunity to exert it under favorable conditions.

Ayrshire Bulls That Have Left Their Mark.

Of Ayrshire sires which have qualified for registration in the Record of Performance test, and may therefore be properly regarded as having strongly impressed themselves, may be made to note a few which are of special interest, not only through their proven worth as getters of high producing cows, but, also, by reason of the fact that all of them trace directly to the noted Ayrshire bull, Traveller (144), that headed Andrew Mitchell's herd in Scotland in the early nineties. Three of these bulls, Scott's 1718 (21 daughters qualified), Hamilton Chief -1749 (7 daughters qualified), Gold Mine -22303 (4 daughters qualified), are all sons of Royal Peter of St. Ane -13144; Hamilton Chief and Gold Mine being full brothers. The dam of Royal Peter of St. Ane -13140, who himself has four progeny qualified, was sire by Traveller. Another qualified Ayrshire, The Miller -10442 (7 daughters qualified), was sire by Dainty Lad of Elm Shade -8919, who has six daughters qualified, among them Milkmaid Th -2576; the champion Ayrmaid record of Performance cow of Ayrshire being full brothers. Canada. Dainty Lad of Elm Shade was sire by the noted show bull of twenty years ago, Silver King -5809, who was himself a son of Traveller. Here we have a splendid illustration of that most highly desired quality in dairy sires, the power to transmit high producing capacity to progeny of both sexes, with sufficient force to carry it down generation after generation.

Of other Ayrshire bulls which have qualified in the Canadian Record of Performance test, Haysmair Milk Record (Imp.) -25423 (6716), Ivanhoe cord (Imp.) -19596, Duke of Ayr -29576, one of the latter sons of Woodroffe Courade -29298, Barckenis King's Own (Imp.) -20726 (5695), Pearl Stone of Glenora -18510, and others, have, during the past few years, contributed largely to the fixing of the Ayrshire type in the Canadian herds, and to the fame of the breed through the performance of their progeny both in the show-rings and as an officially recognized producers.

Jersey Bulls of Note.

If space permitted, much interesting evidence could be given of what the Jersey breed in Canada owes to the use during the past ten years of such noted bulls as Merry Fair's son, Brigadier -499, British Columbia, Brampton King Edward -4289 and Brampton Blue Beam -307, in Alberta; Viola's Bright Prince -3603, in Ontario; and Brampton Pearl Fox -1641 and Brampton Stockwell -810, in Eastern Canada; each of which has sev-

eral daughters qualified in the Record of Performance test, and has left his mark on scores of other females which have never been entered in the test. In tracing back the ancestry of these bulls as well as that of other bulls of the breed, facts similar to those already mentioned in the case of other breeds regarding the maintenance of productive capacity are graphically illustrated.

Good Bull Getters important.

While the securing or developing of a bull which will prove to be of a higher class females is essentially the primary ambition of the breeder of pure breeds, it cannot be denied that the sire which have made the greatest names for themselves are those which have impressed themselves upon their male as well as upon their female progeny. This fact has been amply illustrated in the bulls already referred to. Moreover, it should be remembered that the hope of the improvement of the grade herds of the country lies in the production in our pure bred herds of a large annual supply of commercial bulls. After all, our grade herds constitute the foundation upon which the cattle and dairy business of the country stands. Substantial progress in their improvement can be made only through the continued use of pure bred sires.

During the past four seasons, in the supervision of the purchasing and of the management after placing of over fifteen hundred pure bred bulls, owned by the Dominion Live Stock Branch and loaned to associations in all parts of Canada for the purpose of improving grade stock, the writer has had an unusual opportunity of accumulating much interesting information regarding this phase of the influence of our pure bred herd headers. This is a question, however, which lies somewhat outside the scope of this article. In this connection, however, the fact should not be overlooked that the use of good pure bred bulls in our grade herds has a resulting effect upon the herds themselves which cannot be estimated. For instance, the popularity of the Ayrshire as a breed in certain parts of this country, and particularly in certain counties of Quebec, may, unquestionably be attributed in a large measure to the success obtained through the use of imported and Canadian bred Ayrshire bulls on ordinary grade cows from 1850 to 1850. On the island of Montreal the pure bred Ayrshire bulls imported and loaned to farmers by the old Montreal Agricultural Society did much not only to improve the grade herds, but also to stimulate interest in the establishment of pure bred herds. In the counties of Huntingdon and Chateaugay, one of the great Ayrshire centres of Canada to-day, similar results occurred through the introduction of such bulls as Sir William—553—in 1868; Sir Philip 2nd—688—about 1872; Golden Guinea—4454—in the late 80's, and particularly Uncle Sam of Trent River—6974—, dropped by the famous Canadian-owned champion cow "Nettie Osborne" (imp.)—5356—at the World's Fair, Chicago, 1893.

Judged by the Progeny.

In conclusion, it may perhaps be well to emphasize the fact that the good bulls of a breed are not necessarily animals with great show-ring reputations. Some of the most renowned show bulls of their day have failed to leave a marked influence on their respective breeds. A well-known instance of this fact is found in the famous Canadian bred Shorthorn, Young Abbotburn—110697—whose name echoed over the whole American continent twenty-five years ago. Purchased in 1890 by an American breeder at five years of age, he was the undefeated champion at all of the State Fairs at which he appeared in the heart of the best raising country during successive seasons until he crowned his achievement by being awarded the grand championship over

all beef breeds at the World's Fair in Chicago in 1893. Yet, largely no doubt as a result of his show-ring career, this bull sired only one animal of outstanding merit, the great cow Mary Abbotburn Tib. Similarly many instances could be quoted of bulls which never attained to show-ring prominence, but which are to-day recognized as having exerted a marked influence upon their respective broods. While on the other hand, the names of countless bulls which have gained fame both in the show-ring and through the progeny may be called to mind, the fact should not be lost sight of that the latter qualification is the only one which really entitles an animal to recognition as one of the good bulls of a breed.

A Convenient Water System

W. V. Hopkins, Halton Co., Ont.

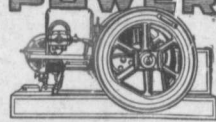
In connection with our water system we have a lead-lined tank constructed of two-inch lumber, which is directly over one of the stone walls in the existing support of the tank, which is seven feet long, three and one-half feet wide, and over six feet deep. It is filled from the cave-trough by a short pipe, as the end of the tank is only six inches from the outside wall. An overflow galvanized pipe, much larger than the intake, carries the overflow to a cellar drain, passing a sewer-pipe trap as it leaves the cellar. The connection at top of tank is ten inches wide and two inches deep, thus allowing the water to get away very quickly.

Two-thirds of the roof drains into this tank and one-third into an underground cistern, bricked over. A pipe from the pump at the kitchen sink connects this outside cistern so that it can be pumped at the sink, and, if desired, can be pumped to the above, so we are never out of soft water. We have a large perpendicular tank beside the kitchen range for hot water, and have hot and cold soft water in the bathroom above, at kitchen sink and at sink in the laundry below, where the men wash. The boiler on stove in the laundry is filled by turning a tap. A hot-water heating system is arranged so that by turning a stopcock the radiators are filled from the tank. We change the water in the radiators once a year when soft water is plentiful. There is a stopcock in the pipe at the tank, which can be closed when we wish to make repairs. The pipe goes up above bottom of tank about an inch, so that sediment does not get in. This tank is covered with matched lumber, and water in it has never frozen. A rod goes across it about the centre, and it is fastened to boards in several places to act as a support.

Battalion Orders.

- 6.30—Reveille, "Christians awake."
- 6.45—Roll-call, Parade, "Art thou weary?"
- 7.00—Breakfast, "Meekly wait and murmur not."
- 8.15—Company Officer's Parade, "When He cometh."
- 8.45—Manoeuvres, "Fight the good fight."
- 11.15—Swedish Drill, "Here we suffer grief and pain."
- 1.00—Drink, with which ye thankful people, come."
- 1.15—Rifle Drill, "Go, labour on."
- 3.15—Lecture by Officer, "Tell me the old, old story."
- 4.30—Dismissal, "Praise God from Whom all blessings flow."
- 5.00—Tea, "What means this eager, anxious throng?"
- 6.00—Free for the night, "O Lord, deliver us from all our iniquities."
- 10.00—Last Post, "All are safely gathered in."
- 10.15—Lights Out, "Peace, perfect peace."
- 10.30—Inspection of Guards, "Sleep on, beloved."

Better - Cheaper POWER



A Gilt-Edged Investment

No outfit you could make toward the betterment of your farm could bring you better returns on your investment than the money you will put into a Page Engine. Whether you select a Page Gasoline burning Engine or the more economically inclined Page Engine that burns Kerosene—you are certain to find an unmeasured reduction in the cost of operating

your farm machinery. And compared with any other engine we've ever seen at work, we know that the Page will reveal a power-capacity and dependable, easy-to-operate simplicity that will "open your eyes." There really are no other Engines that begin to compare with Page engines in sheer downright value.

THE PAGE WIRE FENCE COMPANY LIMITED.

1130 King Street West, TORONTO.



The Gift That Gets A Smile -

because it guarantees unequalled service—from Christmas to Christmas—over and over again—is

The Gillette Safety Razor

It's the "safest" gift you can select, for every man shaves, and knows that in the Gillette you are giving him the best equipment that money can buy. His appreciation will be SURE and LASTING.

Christmas Gillette displays will be in the windows of all the hustling Gillette dealers—Drug, Jewelry, Hardware and General Stores—everywhere—in a dozen styles or more—priced from \$5 to \$25.

Gillette Safety Razor Co. of Canada, Limited
Office and Factory—GILLETTE BUILDING, MONTREAL.



Use Rubber To Save Leather —It Is Needed In The War!

Rubber Supply Is Ample— Leather Is Scarce and Very High

Leather is being worn out faster today than ever before in the history of the world, while production is considerably less than a few years ago. While the consequent shortage is keenly felt by the civilian who has to pay half as much again for his own and his family's shoes, it is even more serious for the Government, which must supply hundreds of thousands of soldiers.

Rubber, too, is being used in enormous quantities on account of the war—One British manufacturer, for instance, is working on a rubber boot order for the army which will take 14,000,000 pounds of rubber, fabric and chemicals. But the supply, thanks to the great rubber plantations in Britain's tropical Dominions, is easily keeping up with the demands, and raw rubber, despite a war tax of 7½%, is actually cheaper today than before the war. So, though the fabric and chemicals used cost nearly double, rubber footwear has not gone up very much in price.

These conditions naturally are leading thoughtful, thrifty, patriotic Canadians to save leather just as much as possible by wearing rubbers, overshoes, high rubber boots and heavy farm rubbers. In addition to the very substantial saving in cost, rubber footwear has decided advantages for wet or cold weather around the farm or in the woods. The men like its warmth, dry comfort under all conditions, and the women like in the way it sheds the dirt instead of bringing it in to melt and track around the house. For the children, too, particularly if they are walking a long way to school, rubbers and overshoes mean a great deal in warmth, comfort and protection against colds.

"Doing Without" Rubbers or Overshoes Is Simply Thoughtless Extravagance

Old Dutch

quickly and thoroughly cuts milk clots and scummy accumulations from milk pans and pails—No greasy film left on the article cleaned.



Studying the Cow's Individual Requirements

Learn What She Relishes—Feed a Little Less Than She Wants—Increase the Feed as Her Appetite Increases—Geo. A. Laidlaw, Oxford Co., Ont.

SUCH wonderful records have been made within the last three or four years by that faithful animal, the dairy cow, that many people are simply amazed. Many others, however, are reaping a harvest from the sowing of the men who first were bilious of a good hay when given a chance to make use of herself.

In the year 1902 we kept our first milk record of a cow. At that time our herd was all grade cows. It seemed a little better than the rest, so we were anxious to know her yield of milk for a year. Weighing her milk for the year showed that she had given 9,006 pounds in all. The dairy reports at that time gave 5,500 pounds as the average production of dairy cows in the province, so we thought we had a wonderful cow, and therefore began to take a deeper interest in her, and this naturally led to increased interest in the whole herd. This cow was then six years old, and just in her prime. At fourteen years of age she gave over 12,200 pounds of milk in the year. Possibly this would not be considered an unusual record, but it shows the results of making a study of the dairy cow.

Care and Feed Go Hand in Hand.

We cannot accomplish all with care, nor yet with feed; the two must go hand in hand, or we will be greatly disappointed, and will probably give up and discredit what we hear of other cows. To get good results we must make the cow comfortable. This requires attention to the individual. One cow, tied in a stall, might be comfortable and do her very best, whilst her stable mate, likewise tied, might become stiff and sore. Again, some cows, and often really good ones, will give their milk down much better for one milker than for another, who is just as good a milker. The person who tends the cattle must not excite them, but should go among them as quietly as possible. A good cow needs a great deal of nerve force, and hence loses it through excitement, and hence cannot use it in producing milk from the good feed she has consumed.

The greatest factor, I believe, in increasing a cow's production is good health. The three important things that are necessary to keep her so are: sufficient exercise, especially before calving; a well-ventilated stable, and plenty of wholesome feed fed wisely and carefully. To give the cattle exercise, turn them out every fine day, and leave them out just as long as they are moving around and are not suffering from the cold. It is a good plan, if possible, to have cows running loose most of the time for two or three months before calving. A word on the feeding: This is where we must know our cow, her needs, her likes and dislikes, if we are going to get the best out of her. Some cows would not stand over 50 or 60 pounds of roots a day, while others would take 100 or even 125 pounds, and make the best use of them. Likewise with the ensilage; some will consume 50 pounds a day, while others could not make use of 30 pounds.

The dairyman must make a study along two lines: First, as to what end he is feeding, whether for milk or to put the cow in condition for work; second, as the individual requirements. The dry cow does not require as bulky a ration as the milking cow. Not only does good care apply to the pure-bred cow that is being fitted for official work, but also to the good grade cow that the best of care be given at this period. If she is a poor producer, it does not pay

to keep her; but if she is a good cow, working hard for ten months, she deserves the best of care and feed for the other two months. She requires just a fair ration of ensilage, a few wisht good hay she will eat. The amount of ensilage is decreased as she nears the calving time, till she gets very little when she calves.

This a Critical Feeding Period.

This is the most critical period in the cow's life. Hence, the judicious feeder will give each cow his special attention, find out her likes and dislikes, and feed her accordingly. A fresh milch cow that is overfed is often nearly ruined for that whole year, as fat as production is concerned. One cow may come to her full feed in ten days, while it may take six weeks in another. Hence it may take success in constant vigilance. Watch the cow, learn just what she will eat with a relish, and feed her so that she will want just a little more, increasing the feed as her appetite increases.

In one way cows are like human beings. What one likes, another dislikes. We cannot, then, expect a cow to eat something she does not like. This, therefore, is a good reason for a study of the individual. Also, all foods do not agree with all cows. For instance, cottonseed meal, fed in some cases, while it is almost poison to others. A good safe ration, however, for practically all cows is equal parts of bran, oats and all-cream milk. Still, there are times when we can get other things better, and if we have studied food values, we can often profit more by feeding some other ration.

The world can now boast its 20,000-pound cow. How did it happen? It did not just happen. It was accomplished by knowing, through studying the individual, just what was best for her every month in the year.

A good feeder will watch his cow in many ways. As I have already stated, he will watch her appetite. He will see when her bowels are kept right. He will see that her coat is sleek and glossy, and that her hide is loose. The experienced stockman can pretty well read her feelings by her expression. If he attends to all these matters, he will come to regard the care of his herd as an interesting study. And although only the few ever obtain the world's record cows, yet to those who make a science of caring for and feeding their cows, success is assured, and they will be rewarded by a considerable increase in the production of their herds.

Fall Treatment for Ticks

My sheep are infested with ticks. It is now too cold to dip them, and I would like to know if there is any other remedy by which the ticks can be controlled.

Frequent dustings of pyrethrum powder, which may be obtained from any druggist, are beneficial. The most satisfactory way, however, to divert a flock of ticks is to immerse the sheep in some reliable dip in the spring. A dip may also be applied by parting the wool and pouring in from an old tea pot or some such vessel. If all the members of a flock are properly treated, they will remain free from ticks until contaminated from some other source. Additions to the flock should therefore be given attention.

The Dairy Farmer's Most Profitable Sideline

Hog Raising and Dairying Complementary — Winter Board Criticized—A. C. Hallman, Waterloo Co., Ont.

DAIRY farming is a profitable and remunerative occupation if conducted on good, sound business principles, and nearly all successful dairymen carry some sideline with it. I know of nothing that is more profitable than hog raising, either for breeding or commercial purposes. Our neighbors to the south call the hog the mortgage lifter, and there is a great deal of truth in the statement. Many of them make hog raising the main line of farming, or a sideline along with fattening cattle in the corn belts. There are several good reasons why hog raising can be made profitable with dairying. The succulent foods that are necessary for successful dairying, such as corn, roots, alfalfa, sweet or red clover, all enter into the profitable production of pork. In fact, they are an absolute necessity for cheap production. A hog is not satisfied without a full stomach, and the profits depend largely on what it is filled with. The prime factors, however, and the by-products in connection with dairying.

By-Products and Waste-Products.

Dairying may be classified under several heads: Selling milk to towns and cities; condensaries or cheese factories; selling cream; or butter-making on the farm. In the two former classes there is no by-product left. With the cheese factory, the whey is often returned, and in the case of the latter two, the by-product is all left on the farm. Every farmer should depend on raising some young stock and his best calves should be raised. The successful dairyman raises mostly his heifer calves from his best cows to replenish his herd from time to time. Well-raised calves always have a good commercial value, but there is still room to raise some hogs, even where the milk is all sold. There are odd times when there is an over-supply, and there are always certain wastes or offals on every farm. Waste matter from the kitchen can be disposed of in the most sanitary way by feeding to hogs. Skim milk is one of the most valuable by-products, and the commercial value is based at 20 cents per 100 pounds. This can be considerably increased by judicious feeding with a combination of other feeds. Buttermilk is based on the same value as skim milk if fed to hogs.

What the Professors Say.

My own practical experience has been that for best results too heavy rations should not be fed either to calves or hogs. Bone and muscle-forming foods should be fed. There will be a time when there is a shortage of by-products, but hogs can be very successfully raised even with very little or no milk, on scalded wheat middlings, digestion tankage, off-enske, and so forth. Prof. Henry, in "Feeds and Feeding," claims that from five to six pounds of skim milk is equal to one pound of grain or the relative value of one pound of skim milk is equal to two pounds of whey. Prof. G. E. Day, of the O.A.C. Guelph, after conducting a series of experiments, showed in the annual report of 1910 that by clearing up everything, cost of keeping brood sows, service fees, and cost of feeding pigs from birth to finish, making due allowance for losses with young pigs, the under normal conditions for feed prices, by feeding a fair allowance of succulent feed with dairy by-products, hogs can be profitably raised and sold at six cents a pound and give a good account of the food consumed. This is borne out with many private records where good margins are shown at less cost per pound.

Hog raising can be made a very

profitable sideline in all general farming, and no farmer should be without hogs if only for his own pork, so that he may get it at first cost. Where hog raising is unprofitable it is because it is too much of a sideline and is not given due attention. The hogs are overstocked; or underfed; too much grain and not enough succulent food is given; exercise or fresh air are not provided; or filthy quarters are tolerated. We must cater to the demands of the consumer in order to get the top price, and it is the top price that makes the business profitable.

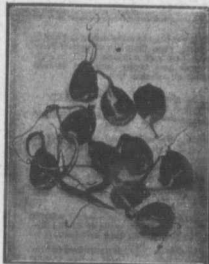
A Word of Criticism.

I cannot conclude without expressing my extreme surprise that the Winter Fair Board allowed a prize for "butcher's hogs" equal to the select bacon prizes. I consider this a most serious mistake to the bacon hog industry. Large sums of money and much energy have been spent in educating the people to produce the bacon hog for the British market. I have, so far, failed to see statistics showing any demand for the butcher hog. There have always been plenty of culls from our local trade where such a demand exists, and I have never yet seen where the prime bacon type did not more than answer the purpose when sold at the same money. This is getting in the thin edge of the wedge, and I consider it a long step backwards in the bacon industry. The Winter Fair is a great educator for public opinion. There have always been a number of people who did not take very kindly to the raising of bacon hogs, although experiments have borne out that it can be produced as cheaply as any other type of hog. Some are sure to seize on the granting of this prize as a reason for getting away from the bacon type.

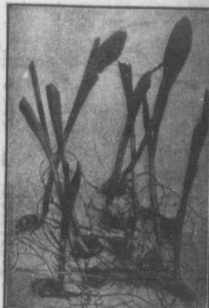
To promote the keep of profitably productive dairy animals only, and the elimination of low yielding ones, Contesting or Milk Record Associations are given generous aid by the Department.

When You Buy the Best

You take the Minimum Risk



Test 1—Corn that germinates, but does not show vigorous life. Too much ordinary corn like this is used for seed. Don't take chances.



Test 2—Corn planted same time as Test 1. Conditions of both tests strong. Vigorous plants. The difference between Corn that will grow and Corn that will grow vigorously constitutes the difference between a poor and a bumper crop. From our selected seed stock, where you sow the best you take the minimum of risk.

Many Farmers Have Already Bought

their seed corn and grain, of 1915 crop, from us— for next Spring. They require strong, vigorous seed of high germinating power. All our seed is selected and tested before we send it out. You are also concerned about the advancing prices. We are willing to sell at the following prices:

- CORN—Rack or Nail cured, in crates, on the cob, Wisconsin No. 7, Golden Glow, Leaming, Salsky, White Cap, Longfellow, Champion's, North Dakota, \$5.00 per bush. Same varieties crib cured, on cob, in bags, \$2.25 per bush.
- WHEAT—Marquette, Red Fife, Wild Goose, and White Russian, \$2.35 per bush.
- OATS—O. A. C. No. 72, Registered, \$1.50. Golden Glow, Unregistered, \$1.70. Banner, Registered, \$1.50. Banner, Unregistered, \$1.10.
- BARLEY—O. A. C. No. 21, Registered, \$1.65. O. A. C. No. 21, Unregistered, \$1.40.

Send us your name and address and we will mail you free one of our 1917 catalogues—just as soon as it is off the press. This is not only a catalogue, but is full of information which every progressive farmer wants to know. No exaggeration, just plain facts. Our prices are right. Bear in mind also we pay Railway Freight in Ontario and Quebec, if your order amounts to \$25.00 or more. Mail us a post card with your name and address without delay.

GEO. KEITH & SONS 124 King Street East TORONTO

"It Might Have Been"

LOOK at the price of Apples this year. Were good apples ever worth so much? Dealers cannot fill orders at any price. In 1916 few orchards were well sprayed, many were not sprayed at all. If there had been more "well-done" spraying, there would have been more good apples this Winter.

TO SPRAY IS NOT ENOUGH

It is necessary to be sure of the quality of the spray material. It is a waste of money and a loss of labor to use inferior or cheap sprays. If you would be sure of results, be sure of the quality of the spraying material, and the efficiency of the spraying machine.

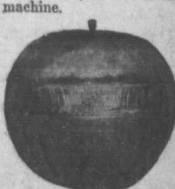
We recommend Niagara Brand Soluble Sulphur, Lime Sulphur, Arsenate of Lead, and Niagara Dust Spray, and we guarantee the quality of everything that bears our name or trade mark.

The same guarantee that we give for the quality of our sprays is given for the efficiency of our spraying machines, both for liquid and dust sprays.

Do not place your order for 1917 until you get our proposition.

Niagara Brand Spray Co., Limited, Burlington, Ont.

Remember, "Wherever Fruit Excels Niagara Spray is used."



FARM AND DAIRY

The Dairy Herds at the O.A.C.

(Continued from Page 7.)

record of nearly 500 lbs. fat in 1 year. With this foundation, and reasonable luck, the Jersey herd in a very short time will compare very favorably with the other breeds represented at the College.

In 1913 it was decided to give some attention to the question of improving the milking quality of the Shorthorn breed, which had somewhat deteriorated through the continued use of the high quality beef type Scotch Short-horn in Canadian breeding operations for a considerable number of years. To this end, Professor George E. Day was commissioned to buy in England a number of the English Bates type Dairy Shorthorns. He made a selection of nine females and three bulls, which on importation were, with the exception of one bull, added to the Dairy herd at the College. Critical examination of these animals revealed that they are of an extremely serviceable order of beef conformation, and the records of most of them demonstrate that they are capable of good milk production.

Seven of these females up till September, 1918, have each completed a full lactation period. The seven, only two of which were over four years old, produced an average of 8,513 lbs. milk and 366 lbs. of fat, with an average test of 4.1 per cent. butter fat. Three of them produced over 10,000 lbs. milk, and two produced over 506 lbs. fat in the l.o.p. One cow in particular, Golden Bess, produced 12,400 lbs. milk and 660 lbs. butterfat. It is worthy of note that the cow showing the highest type of beef perfection is also one of the heaviest producers. She is now on her fourth lactation period. At the College, all three of which will average over 13,200 lbs. milk and 400 lbs. fat. This cow, Ford Waterloo Baroness, is also leader in the 4-year-old division, as well as for the Shorthorn breed. From the work of these cows it seems entirely feasible to combine in the one female

time, no definite results for publication have been obtained. Investigation work along the line of the intensive method of stable feeding, or soiling, in summer as compared with pasturing, is now in progress, and so far indicates that the superiority of good pasture for the economical production of milk under existing farm conditions in Ontario.

Community Breeding in Successful Operation

(Continued from page 9.)

The main reason for the existence of pure bred dairy cattle is that they may form the basis of general improvement on the common or grade dairy herds. It is therefore imperative that superior productive ability, combined with the highest possible standard of individual excellence, be maintained in our pure bred herds, ensuring a constant supply of suitable bulls for grading up and improving the common dairy herds. How can this object be attained in the most direct and practical way? Good feeding and management of course looms up large here, but this is not enough. Selection is the foundation of improvement. For the past 12 or 15 years the high price available have almost prohibited any system of weeding out the inferior females from the dairy herds of all the breeds. Practically all females have been retained for breeding purposes, whether coming up to the required standard or not. All this has resulted much to the detriment of all the dairy breeds.

In view of such conditions it is highly important that the herd sire be selected with the utmost care, for it is only through the very superior quality of the bull that general improvement in the absence of a rigid system of weeding or selection. The very best sire that money can buy is handicapped because of the difficulty of securing a female that fail to conform to a reasonable standard of excellence, both as to production and type. I submit that only by securing the best of most pronounced superiority by the medium of cooperation if necessary, and by utilizing their services to the fullest reasonable extent, can be realized the opportunity to push to the limit the opportunities open to breeders of possibly the most useful of domestic animals—the dairy cow.

Records Made by Cows of the Various Breeds at the O. A. C.

Table with columns: Name of Cow, Age, Breed, lbs. milk, lbs. fat. Lists various breeds like Holstein, Jersey, and Shorthorn with their respective records.

a high order of beef type and a fair ability to milk. The continued use of cows for classroom work detracts somewhat from the ability to make large records, but in spite of this handicaps the records are fairly creditable ones, nor were they obtained through extravagant feeding methods, as practically every cow showed a good profit over cost of feed at market prices. In fact, it is the policy of the Farm Department to conduct its feeding operations along strict utility lines. This applies also to management, as one of the lines of investigation now under way is the possibility of good record from twice-a-day milking, rather than the more expensive three and four times per day, which is usually followed in most pure bred herds where R. F. work is being conducted. As the connection is it is worthy of note that the following records have been made in the past year, by milking only twice a day.

With the exception of the Grade, Blackie, the above cows fulfilled all the requirements of the R. O. P. The milking machine is being used in an experimental way, but as the work laid out will cover three years

subsequent to the summer heat, the excellent prices being paid for hens should warrant a very close culling of overfat hens and those inclined to be broody. Overfat hens, as a rule, are poor layers and often succumb to the summer heat.

FROZEN UP, but plenty of eggs



Now is the time to make money in poultry... One cent a month is all it costs up... to start fresh and laying early and to keep them laying all winter. Try

Pratts Poultry Regulator

at our risk. We will refund your money if you don't get more eggs... Thousands of egg posturers are using 'Pratts' and are coming in on their wisdom and fortune. Fratts Poultry Regulator keeps the female healthy and vigorous, tones up the organs... digestion and egg production—prevents disease.

At your dealer's in 350 pkgs.—larger amounts up to 15 lb. pkgs. at \$1.25; 55 lb. pkgs. \$3.50; 100 lb. bags \$1.00.00.

Pratts is guaranteed to prevent and cure... Pratts quickly tones up... the blood and cleanses the system... the inflammation and reducing the fever. At your dealer's in powder or tablet form, 5c and 10c a box.

Money back if not satisfied. Write today for Fratts 60-page Book 'Poultry Wrinkles.' It's FREE.

Pratt Food Co. of Canada Limited

88 St. Claremont St., Toronto, Can.

130-Egg Incubator and Brooder for \$14.50

If ordered together we send both machines for only \$14.50 and you may all fresh and duty checked by R. E. station in Canada... We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. E. station. Doors sliding, double width, double space between, double glass... Hot water, double width, double space between, double glass... Hot water, double width, double space between, double glass... Hot water, double width, double space between, double glass...

THE BISSELL DISK

has made a great record throughout all Canada. There are good reasons why this is so. Balanced Right—Does not bump up or. Improved Plate—Cuts and turns soil over. Hitches well Back—Easy draught. This Disk has several innovations, but no equal. None genuine without the name "BISSELL." Try trials given on hard land with anything that cultivates. Write Dept. R. for free Catalogue. 93

T. E. BISSELL CO., LIMITED, ELORA, ONT. See advt. also on page 19.

Safety First Every Farmer, Every Owner of Horses Should Use RED TIP HORSESHOE CALKS during the Winter Season.

Whether your horse is a light cutter or a heavy draught horse there is a calk made especially to fit his requirements. When worn down RED TIP HORSESHOE CALKS can be removed and a new set inserted in becoming time.

They will not break off and instead of becoming dirty will wear sharper with use. By this method your horse is always sharp shod and you eliminate all the danger and worry of winter hoars.

RED TIP HORSESHOE CALKS are cheapness to get, easy to put on and will absolutely hold up any horse on any pavement or road, no matter how slippery. They will save time, money and manure.

Go to your blacksmith today and have your horse fitted with RED TIP HORSESHOE CALKS and remember that genuine NEVERSLIP HORSESHOE CALKS ALWAYS HAVE RED TIPS.

Never slip Manufacturing Company 559 Pius ix Avenue Montreal, Canada

When You Write—Mention Farm and Dairy



THE GUARANTEE OF PROSPERITY IN NORTHERN ONTARIO

Northern Ontario

A Vast New Land

IT seems like a romance or a fairy tale to say that the people of Ontario possess a new land within its boundaries that is fully four times the size of Old Ontario and far larger than Great Britain, or France, or Germany. That new land—new in having been recently known and begun to be settled—is now known as Northern Ontario, and is divided into eight great districts—Nipissing, Timiskaming, Sudbury, Algoma, Thunder Bay, Rainy River, Kenora and Patricia. It is 330,000 square miles in extent, and is 121,000 square miles larger than the largest of the three old countries named. So near to us, it is not prized as its worth demands. Later than the prairie in advertisement, this fact has carried the vision of homeseekers much more toward the treeless West than the tree-covered North. Yet both are great in rich extensive land. And the intending settler should not take a half view, but consider whether it is not worth while to investigate the merits of territory nearer hand.

Millions of Virgin Acres

IT should not be a great surprise that out of so vast an area there are, say, twenty million acres of agricultural land, most of which is good. There is what is called a Clay Belt, which extends westerly from the interprovincial boundary between Quebec and Ontario for over 400 miles, and which varies in depth, north and south, from 25 to 100 miles and more. The Clay Belt proper lies north of the height of land, and is an area of at least sixteen million acres of level or undulating ground. The soil, a rich clay of the height of land, where agricultural results have been excellent, and it is probably better than the level clay stretches of fine farming land in Manitoba. Sandy and gravelly ridges and areas appear in various places, but from the point of view of the general needs of the settler these have their own special advantages in affording material for concrete construction and road improvement. It is safe to say that from 65 to 75 per cent. of the Clay Belt is good farm land, and that this percentage will be considerably increased by comprehensive drainage, which the rivers will aid in making easy. Aside from its immense resources in timber, mineral, water-power, fish, game, and scenery, Northern Ontario contains one of the greatest expanses of fertile territory in the world.

The Soil as Settlers Find It

ON the subject of soil the great majority of these same settlers emphatically affirm that it is good, and no one is unqualifiedly against it. Some of them use such strong expressions as—“Yes, whether it be in the clay loam or sandy areas, excellent crops are harvested, each soil produces its own individual crops to the best advantage;” “we have all kinds of soil—heavy clay loam and sandy loam—which cannot be excelled in any part of the Province;” “no better in the Dominion;” “will produce anything from No. 1 wheat to strawberries.”

What the Settlers Think of Bush Life

THE great preponderance of their expressed preference lies on the side of the Bush. The following are some of their vigorous words: “Yes, I had two years on the prairie and I would not return, one reason is we can get out every day in the winter;” “you have plenty of firewood and wood for repairing machinery, fence posts, lumber for building, etc.,” “no blizzards in winter, no windstorms in summer, there is shelter for stock, and good water;” “we have better homes and not so great frost with frost and hail;” “there are beauties beyond description in the spring, only imagined on the long, unbroken prairie;” “it has many advantages—scenery, shelter, fuel, lumber, pine atmosphere, delightful walks, shaded;” “there is more employment in the winter months;” “one can manage with the bush life without capital better than in the prairie.”

Markets and Dairying

THERE is nothing the settler produces in the north country but what finds a ready market. The great mining districts to the south absorb it all and at good prices—hay, grain, butter, eggs, pork—everything he produces. This market will ever developing with the mining activities, so that for years to come a steady market is assured. Dairying promises to be one of the big industries of this new land. Clover and other crops—oats, wheat, peas, barley and all produce in abundance. Alsike grows almost as a weed. This insures abundance of pasture for summer feeding. During the coming summer, the Provincial Department of Agriculture is erecting a splendid creamery at New Liskeard as an outlet for this rapidly developing industry. These new homes in the great Northland of Ontario are only 300 or 400 miles north of the city of Toronto. If you are ambitious for a home of your own, one of them can be yours for the asking and the work of doing settler's duty.

FOR FREE LITERATURE DESCRIPTIVE OF NEW ONTARIO, SETTLERS RATES, ETC.

HON. G. HOWARD FERGUSON,
Minister of Lands, Forests and Mines

Write—H. A. Macdonell,
Director of Colonization, Parliament Buildings
TORONTO, ONTARIO

Assisting the Sheep Industry in Quebec

(Continued from page 3.)

ditions countries might be grouped to advantage. Wool grading centres are arranged at various business centres convenient for the members, and where at least three thousand pounds of wool can be collected. In some cases the wool has been shipped to these points, and in others, loads were brought in by members or directors of the association. The local grading centre and sale has meant really more than an outlet for the wool. We have found that it has afforded, through its close contact with members, not only a tangible channel of interest but a splendid means of education, thereby enlisting the confidence of its members in a way that the larger centre would not likely do. Moreover, through it the association can control the sale through its own sales committee.

Results of Wool Grading.

In the spring of this year 169,829 lbs. of wool was graded and sold co-operatively for an average price of 41.3 cents per pound, f.o.b. at country points. Of this 61.4 per cent. graded medium combing and brought 43 cents a pound; 34.3 per cent. was low medium combing and sold at 43 cents a pound; 8.1 per cent. was coarse combing, selling at 41 cents; 6 per cent. was rejections and black and gray, bringing 38 cents. Local prices for ungraded wool ranged between 31 and 35 cents a pound, so that grading and cooperative sale netted members a gain of 7 to 13 cents a pound, or 20 to 40 per cent. advance. A fee of four cents a fleece was found sufficient to cover all expenses, such as

postage, printing, wool sacks, paper, twine, labor, etc.

Purebred Sales.

The introduction sale and exchange of purebred stock has received a good deal of attention. The local sales policy inaugurated last year was again adopted and two purebred auction sales were held, one at Lennoxville and the other at Shawville. Fifty-three head, mostly rams, were sold at these sales. The stock was consigned by breeders and was subject to a reserve bid. Prices averaged considerably higher this year than last, which was to be expected, owing to prevailing high prices for commercial stock. In addition, districts which require only a few head of breeding stock are supplied privately from breeders, and where possible a change of sires is effected. Owing to organization the purebred breeders are now in a position to fill outside orders at short notice. Orders of considerable size from Prince Edward Island, New Ontario, Nova Scotia, New Brunswick and Saskatchewan have been filled and this outside trade in addition to the home trade has taken care of practically all available breeding stock this year. This ready market is having a stimulating effect on purebred breeding.

Cooperative Lamb Sales.

Cooperative lamb marketing was tried as an experiment for the first time by five associations in the west and while only a small percentage of the lambs were handled cooperatively the results obtained justify a further extension of the work and the adop-

tion of a more permanent policy next year. Some 2,750 head in all were graded and sold according to grade. Lambs were graded as follows: No. 1, 70 to 95 lb. weights; No. 2, 65 lb. and over; No. 3, 70 lb. and under; and ram lambs of all weights. Aged ewes weighing 100 to 140 lbs. were classed as No. 1; 140 lbs. and over as No. 2; and 100 lbs. and under as No. 3. From 40 to 75 per cent. of the lambs graded No. 1; 10 to 20 per cent. No. 2; 2 to 10 per cent. No. 3; and 20 to 40 per cent. ram lambs. Only a small number of ewes were marketed and the bulk of these graded No. 1 and No. 2. No. 1 lambs averaged \$9.26 a cwt.; No. 2, \$9.14; No. 3, \$8.73, and ram lambs, \$8.89. Aged ewes, No. 1 and No. 2, averaged \$6.68, and No. 3, \$4 a cwt. All prices were f.o.b. at country points. The best results were obtained in those districts lying farthest from market points and in districts where there was little competition among drovers. Lambs that were suckling their mothers and shipped during September in warm weather were found to have a greater shrinkage than lambs shipped later in the season. The shrinkage per lamb on shipments varied from 5.5 to 11 lbs., depending on time in transit, breeding age and weight of lambs and weather conditions. Sales were arranged in so far as possible to avoid low markets, the first sales being held during the early part of September and the late sales during the latter part of October and the first of November. Those marketing castrated lambs were often under the necessity of marketing early, thereby being deprived of the added weight obtained from fall feeding as well as receiving a cut in price. Each shipment was thrown open for bids and

sales were made to the highest bidder. A large number of sales were made direct to the packing houses, while in other cases sales were made to local dealers. In some instances local prices were advanced a cent and a half a pound and in others from a quarter to one cent a pound advance was secured. Co-operative marketing and grading leads to a more careful study of the lamb crop and markets and must eventually lead to a more severe culling of the undesirable breeding ewes. A cost of five to ten cents, varying with districts, covered all expenses in connection with lamb selling.

Roughages for Winter Lamb Feeding.

Experiments were conducted with fifty lambs of uniform type. These were divided into ten lots of five each to ascertain the feeding value of various roughages, silage and swedes in various combinations along with a standard grain ration. The lambs fed on alfalfa hay consumed more roughage and meal, but made seventy per cent more gains than those fed on timothy hay, and made the gains at a lower cost of \$3.78 per hundred pounds. The addition of two to four pounds of swedes to the alfalfa ration increased the daily gains and reduced their cost a further 83 cents on a hundred pounds. The addition of two to four pounds of swedes to the timothy ration caused a slight increase in daily gain, but had no effect on the cost of gain, the roots apparently not influencing this poor ration sufficiently to effect economical gains.

Silage produced gains at a lower cost of \$3.00 per hundred pounds than timothy hay, but at 56 cents more than alfalfa hay and \$1.46 more than

(Concluded on page 18.)

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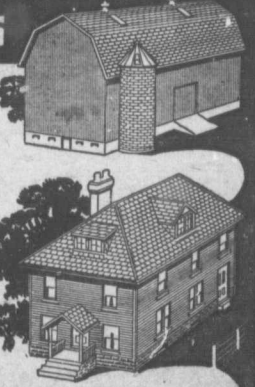
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FARM CHATS

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The Farm Tractor

THERE are few things I would have walked further to see than the tractor exhibit at Whitchy. I put in two years at Whitchy away back in 1878-80, going to school there. As I remember the locality, it is a clay loam soil, and as for stones, not pebbles enough to throw at a hen. I would have liked to see those tractors tried on "Elders-house." What would happen when they struck a stone as big as a barrel; or how much leeway would they make on a slipper? Well!

Nowadays, the efficiency test of an automobile is not on a concrete pavement, but on a back country hill road. The same test would bring out the latest defects and shortcomings of the tractor. Put an ordinary auto in a ditch; it can't pull out; it is dead. Possibly a tractor would stall in the same fashion, that showed great ability on clean soil. A certain elasticity in the transmission, or else a superabundance of motor power is essential to prevent such a major defect. Then again, where is the draw-bar attached to the tractor. For straight ahead pulling, it is largely immaterial with a steady load, but on the turn, or a side hill, a sudden jolt may cause a serious accident, to say nothing of the difficulty of steering. The draw-bar, by rights, should be attached as near to the mid axle of the rear wheels as possible.

An automobile is built over its four wheels, so as to distribute the weight and get easier riding. But in the tractor, like the locomotive, the weight must be largely centred over the driving wheels to get the full benefit of the weight in the wheel grip. It is important to have not merely the regular fast walk working speed, but a low crawling speed. There are gates and bad spots difficult to negotiate, to say nothing of steep hills, and the low gear tends to safety. The reverse or backing should be on the low gear also.

If I were building a tractor, I would add a drum on the hub of the driving wheel. Times are when a heavy tractor breaks through a bridge or gets in a boggy rut and can't get out. But with half a dozen turns of a chain or heavy rope round this drum, and the other end fast to a tree or stout stake, the tractor would hoist itself out of the bog.

Should Have a Belt Pully.
A most important thing about a tractor is when it is standing still, not when it is going. It must be satisfactory driving belt, and for that reason the engine needs an efficient governor. I was watching a tractor handle a road grader engine, and the way it raced and bucked on the inequalities of the ground, turning near the ditch suggested to me that a tractor should always have a governor to keep the machine from plunging on uneven ground. My inclination would be for a multiple cylinder engine. At the same time some of the light auto engines won't stand the strain. It wants a regular heavy duty marine engine to pull all day over a farm.

There is one thing more. The big, heavy tractor that costs two thousand dollars is not for me. There are not ten farmers in Nova Scotia that want such a monster. Cover them over with boiler plate and use them for "tanks." What we want is a tractor that will pull two plows, or do the work of not more than three horses. A 16 h.p., 4-cylinder, 4 cycle marine engine costs \$2000. A choice engine that a 6 ft. binder cost about \$130.

To mount such an engine on wheels with all the gear of an efficient tractor should not represent more than a binder. That is a total of \$375 for the complete tractor, or less than the price of a pair of good horses. At these figures there is a considerable profit for the manufacturer, for these are retail prices, and for the single-wheel driver or triplex tractor, the cost should be even less.

It is not in the few big tractors, but in the many small tractors that there is money, both for the manufacturer and the ordinary farmer. With the winter ahead for the inventors to work out the improvements on the exhibit at Whitchy and elsewhere have suggested that still more progress should be made. Let us hope that next spring there will be another exhibition, and on tougher ground.

Relationship of Type to Production

(Continued from page 5.)

does not conform to the scale of points in any regard, it should not be condemned in the show ring, for the perfect cow as to type has not yet been evolved. Nevertheless I beg to repeat that the greatest producers conform to recent type and are nearly all respects both as to size, general conformation, quality and character. Examples of great show animals of both sexes in all breeds might be cited without any great difficulty. For example, great sires of the Holstein breed, from the days of "Netherland Prince" and "Sarcastic Lad" to present day, show a large proportion of points that are not to be also sires of the greatest producing cows. This applies equally to the cow classes, and Holstein fanciers both in Canada and the United States type and each year amongst the prize winners at the greatest fairs, many cows which have not only large records, but whose daughters also are making tremendous records in milk and butter. For example, great sires of the Ayrshire, and of the other breeds commonly found in Canada. It is true that often championships may be given to animals which have a tendency more toward heavy than toward dairy production, but the most intelligent judge who knows his breed and who knows dairy conformation for production will, if the cows are available, select a type which conforms to the show requirements of the breed in that it represents the greatest and most economical production accompanied by the most graceful and attractive characteristics.

More Help for New Ontario

The Braemar Union Sunday School of Oxford county has furnished \$50 through Mr. John MacKay to aid in purchasing supplies for the fire sufferers in New Ontario. It has also sent it sending forward some seven sacks of clothing and bedding which will be very acceptable.

Mr. Alex. Andrew, Secretary of the Madawson Farm and Dairy, has again written Farm and Dairy asking us to announce on behalf of the members of his club how deeply they appreciate the assistance that has been sent them. It has meant much to them and they say that they will never forget it.

The first thing to do with scoured calves is to remove the cause. Then give them lime water in the milk—Two tablespoonfuls twice a day for a calf two months old, and for larger calves half a cupful. Make the lime water by putting a handful of lime into a pail of water. When it has slacked and settled, pour off the clear portion and bottle it for future use.

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The Guiding Power of a Correct Ideal

(Continued from page 5).

of them have never attained their ideal for their whole breeds, but their work has resulted in much good for the Canadian live stock industry. It is from my observations among the really good herds of Canada, herds that were bred on the farms where I found them, that I will lay down a few principles that may be a guide to the young farmer and prospective breeder in the selection of his ideal.

First, let your ideal conform in all essential particulars to the best conception of the breed as held by previous generations of breeders. Try to make over a breed within a single life time is a venture that offers little chance of success and is unwise in any case. The man whose ideal calls for fine quality and rich milk, would be foolish to select the rugged, deep milking Holstein; the Jersey or the Guernsey offers him a better field for his breeding endeavors.

To select an ideal that will not conflict with the inherited and inbred tendencies of his breed, the young breeder must be a clear student of his breed; he must have his ideal so clearly before him that he can see it in his mind's eye; all animals of his breeding must be compared to the ideal and rated accordingly. Particularly must the herd bulls be selected most rigidly with the ideal in mind.

It is a falling of many breeders, whose ideal is correct in all essential particulars, to be carried away by fads and fancies. It is well to remember that the popularity of any breed or strain or family is based in the long run, on utility value. And there is not a breed of cattle in Canada to-day that has not received a setback at some time in its history because of the devotion of a considerable part of its fanciers, to some passing but popular fancy. Of these fads, color fancies have been most destructive in their results. The Hereford, for instance, is an older breed than the Shorthorn, but its early development was so retarded by the rivalry of three sections of breeders favoring three different colors, that Shorthorns occupied the paramount position in the Hereford men started in real earnest and unitedly to push their breed. Shorthorns, too, have suffered because of whimsical preferences, none of them of long duration, for either reds, whites, or roans. All who are acquainted with the history of the Ayrshire breed, find it hard to calculate the damage wrought by the preference for tight, buttoned unders and too smooth and well rounded a body. Latterly, in both Ayrshire and Holstein breeds, some of the best fanciers have been showing a strong preference for light colors. This, too, is but a passing fancy that cannot last because it has not basis in utility. Beauty of form should constitute a part of every breeder's ideal, but it should never be allowed to interfere with the economic value of the herd.

Community Work Necessary.

So far as the individual breeder is concerned, these two, conformity to breed, type and avoidance of passing fads and fancies, are the most important considerations in formulating an ideal. The breeder, too, should be a missionary for his breed. He should endeavor to make it the breed of the neighborhood. The highest development of any breed of live stock is attainable only when the whole neighborhood is bent on the same thing in the same direction. It has been the neighborhood ideal, rather than the work of the individual breeder, that

developed the Ayrshire in Scotland, the Jersey in Jersey, the Holstein in Holland and so on through all the breeds of horses, cattle, sheep and swine. We need community breeding in Canada. In the breeding community, the individual profits by contact with others of like mind with himself. Healthy rivalry engenders greater progress, and, if a true community spirit exists, better bulls can be secured on the cooperative plan. But the ideal in the mind of the breeder will always be the great guiding power toward breed progress. Even in Scotland, Jersey or Holland, there are breeders without an ideal and in whose hands the breed suffers. But there are also the breeders with high ideals and such perseverance; those indeed are the salt of the earth so far as live stock breeding is concerned. And in the hands of such, lies the future progress of the pure bred animal in Canada. We can no longer depend to the extent that we have in the past in the skill of breeders of other lands. Henceforth, we must, to a great extent, formulate our own ideals and do our own work.

Assisting the Sheep Industry

(Continued from page 17.)

alfalfa hay with swedes. Cereal hay without swedes produced gains at an increased cost of \$2.40 a hundred more as compared with timothy hay. The addition of four pounds of swedes, however, produced gains at \$1.89 a hundred cheaper than timothy. The addition of two pounds of silage to the timothy ration reduced the cost of gains slightly below that of oat hay and four pounds of swedes. Timothy and oat hay alone were not as palatable as alfalfa hay and silage. With the addition of swedes, however, the lambs consumed more roughage and meat.

The following conclusions may be drawn from these results: First, alfalfa hay is the cheapest and most economical roughage to use in lamb fattening; second, the addition of two to four pounds of swedes increases the gains and lowers the cost in all roughages, except timothy hay, when the defective roughage is apparently not overcome, probably due to the lack of protein in the ration; third, timothy hay alone is not an economical roughage to use for lamb fattening; fourth, silage, if fresh and sweet, stands up to alfalfa hay for economy of gain; fifth, oat hay, unless fed in conjunction with liberal quantities of swedes, is not an economical roughage for lamb fattening.

Edgational Features.

The practical and educational features of the work go hand in hand. The grading and sale of wool, the grading and sale of lambs and the introduction sale and exchange of breeding stock provide kindred problems plentifully. They give ample opportunities for securing timely topics for addresses and features for demonstration, which are directly related to the furthering and improvement of the sheep industry.

Since the war began the Belleville cheese board and the patrons of the factories it represents, have raised more than \$10,000 for Red Cross and Patriotic work. Besides supplying material for Red Cross workers of 11 branches, with which they have made comfortable and necessary for soldiers, it has also been making grants to the battalion funds.

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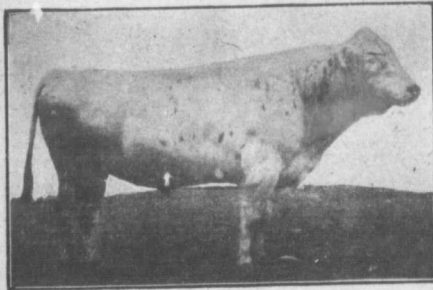
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May Echo Verbelle, dam of May Echo Sylvia, and a cow of great merit.

The Making of a World's Champion

THE world's champion in the dairy field that is of most interest to Canadian breeders is the great Holstein cow, May Echo Sylvia. The records in the production of milk and butter fat in all classes are now so high that it takes an animal of great ability to make a new world's record. Yet the rate at which records have been broken during the last few years is astonishing, especially when we realize that with each new record made the mark for the next one is placed still higher. The ambitious breeder of to-day, however, still has this high standard as his goal, and though he may never realize it, his contribution to live stock history will be much greater than if he had a lower ideal.

The breeding and development of high class animals, especially a world's record maker, demands a thorough and comprehensive knowledge of the laws and principles at work in their making. The accidental mating of two animals in the world's champion class have been brought forth by means of careful selection and discriminate breeding. The subject of this article is a striking example of such a case. The subject of her breeding and development should reveal some of the fundamental principles of the breeder's art. With this thought in mind, we have given some time to a study of this great cow and her illustrious relatives. Much information given in this article about these families, has been gleaned from breeders who own some of the best, Messrs. Dunnam N. Foster and F. R. Mallory, having given valuable assistance.

May Echo Sylvia is now in her seventh year. She was bred by Mr. B. Mallory, Belleville, Ont., and is the third cow on her dam's side that has proved to be a great producer. She is of good size and of almost perfect conformation. Her career has been one of continuous big records. At the

age of 23 months her semi-official year's production was 17,756.1 lbs. milk and 642 lbs. butter. When she reached the four-year-old class her butter production in seven days was 32.94 lbs. from 759.4 lbs. milk. At six years she increased this to 36.33 lbs. butter and 874 lbs. milk. The star year to date has been her present one, when the following list of records were made:

	Milk.	Butter.
7-day record	853.7	41
30-day record	3,767.3	169.72
60-day record	7,927.1	323.32
90-day record	11,702.8	463.67
100-day record	12,399.8	505.24
Highest 7-day milk record	1,065.8	39.53
Highest 30-day milk record	4,196.9	162.42
Highest 60-day milk record	8,220.1	312.72
Highest 90-day milk record	11,851.1	448.59
Biggest day's milk record	152	

There are other facts of interest about the production of this great cow than her big records. One is that her best day's record of 152 lbs. milk was made on the 51st day under test; and nearly two months after freshening. On the 21st day under test she gave 148.5 lbs. milk, and two days after making her big record, or the 53rd day of the test, she gave exactly the same amount as on the 21st day. Her average for the best seven days' milk is 143.8 lbs., a record no other cow has ever equalled. Her average per cent. butter fat in all the different tests up to 100 days was 3.4 per cent; high enough to be a credit to any cow of any breed.

Her Sires Prepotency

JUST how many of these excellent qualities of May Echo Sylvia can be attributed to the prepotency of her sire, is a matter largely undeterminable. A close study of Inka Sylvia Beets Poach and his remarkable daughter makes clear a resemblance of great importance. When we think of her wonderful achievements we are immediately impressed with the need of great nervous force to withstand the strain of such big milk production. The complete process of manufacture through mastitation, digestion and elaboration draws heavily upon the nervous system of the animal. May Echo Sylvia possesses this nerve force in great abundance, and a close acquaintance with her sire shows that he is in possession of the same characteristic to a marked degree. This is seen by the quick, active move, the alert eye, and the strong, open chin. In short, "Inka," as he is generally known, demonstrates in his whole make up the embodiment of this all-important factor. As a sire he has impressed it on nearly all his offspring. Breeders who own his daughters mark this as one of their outstanding characteristics. The fact that four of his daughters have a combined record of 115.3 lbs. of milk in a day is ample proof of his prepotency in this regard.

The Breeding of Inka Sylvia Beets Poach.

Inka Sylvia Beets Poach illustrates how the ability to stand the strain of big production can become fixed in the blood of a certain strain of animals. The sire of his dam is Gem Pieterje Hengerveid Paul DeKok (1357), and it is claimed he possesses 50% of the same blood as the great Ormsby Jane Segis Aggie, who holds the world's record of 44.42 lbs. butter in seven days. Sir Alta Poach Beets, the sire of Inka Sylvia Beets Poach, was the first bull in the world to have a 38 lb. 4-yr-old daughter. King of Pontiac and Inka Sylvia Beets Poach are the only two bulls in the world with 32 lb. sisters, and 40 lb. daughters. Hence there comes through this great sire a fixed quality that is making itself felt in

(Continued on page 21.)

Her Dams Productivity

ONE of the first laws of breeding to be established is expressed in three words: "Like begets like." It is a law that has been in operation ever since the world began, and, more than any other, it is influencing the production of better live stock. It is quite plain that this law was in the operation in the breeding of May Echo Sylvia, for she comes from a line of several generations of producers. Hers is a line of breeding known very widely in Holstein circles in Canada because of the outstanding merit of so many of the animals belonging to it. One other feature that makes it so well known is that the name of her family has been registered, and in a sense become standardized. This has kept the name "May Echo" for animals belonging to this one family. Hence the name "May Echo" has great significance. The foundation cow, which gave her name to this family, contributed very largely to the advancement of Holsteins in Canada. But she gave to her descendants much more than her name.

The outstanding features of the descendants of May Echo are that there has never yet been one incapable of making at least a creditable record, and that among them there has never yet been a bad breeder nor a single instance of lost tests. That May Echo Model, a junior three-year-old, great grand-daughter of May Echo, made 25.42 lbs. butter and 641.1 lbs. milk in seven days, and that May Echo Poach, a junior three-year-old, and a great-grand-daughter, made 25.42 lbs. butter from 671.5 lbs. milk in seven days, and is likely to easily make 20,000 lbs. of milk in a year, go to prove that the individuals of this family are transmitting producing qualities irrespective of the sire used.

May Echo's Breeding.

We naturally wonder what there was in the blood lines behind May Echo that made her so famous as a producer, and gave her the power to transmit such wonderfully good qualities. Her sire was Count Echo DeKok, who has 14 R. O. M. daughters, five R. O. M.

(Continued on page 21.)



May Echo Sylvia.

Her Sires Procrepancy
(Continued from page 20.)

Holstein history to day.
In vitality and constitution, so close-ly allied with the nervous develop-ment of any animal, Inka Sylvia Beets Posch is also outstanding. On Jan. 9th, 1917, he will begin his eleventh year, and he presents a ruggedness of constitution and flashing vitality that indicates unimpaired usefulness as a sire. In the 10 years of his life, he has been used extensively on some of the largest herds in Ontario. Much of it has been spent as a syndicate bull, which is possibly the hardest life for any sire and yet he now shows great agility and ready response as a sire or feeder in the stall. Significant also is the fact that his dam, Inka Sylvia DeKol, is yet a producing matron at the pail and as a breeder.

A Bull of Great Procrepancy.
If procrepancy means the ability to transmit those qualities possessed as an individual and as coming to him from his ancestors, Inka Sylvia Beets Posch has procrepancy. The long list of his producing daughters is a wonderful example of this. No sire ever stood for service in Canada that has such a record. He has never, possibly never was a sire in the Dominion that so clearly evidenced in his own conformation and mannerisms the qualities he gives to his offspring.

The four outstanding daughters of Inka Sylvia Beets Posch are: May Echo Sylvia, owned by Mr. A. C. Hardy, Brockville, and whose record is given in full elsewhere in this article; Lawncrest May Echo, owned by the Allison Stock Farm, Ottawa, with a record as a 5-year-old of 635 lbs. milk, and 26.10 lbs. butter in seven days and 105 lbs. milk in one day; Lawncrest May Echo Posch, owned by the Allison Stock Farm, Chesterville, with a seven day record of 33.78 lbs. butter from 701.1 lbs. milk and 195.3 lbs. milk in one day; and Helena Sylvia Posch, owned by A. D. Foster & Son, who made as a 3-year-old, 23.14 lbs. butter from 670.6 lbs. milk, with best day's milk record of 106.4 lbs. Besides these he has five 4-year-old daughters with an average record of 19.85 lbs. butter and 457.8 lbs. of milk in seven days, and a lone list of younger daughters, whose records space will not permit of publishing. One of merit and distinction that is especially worthy of note is Burkeley Sylvia Posch, the champion milk and butter cow of New Zealand. She was sold by A. D. Foster & Son to a New Zealand buyer, and made a record of 16.640 lbs. of milk and 505.27 lbs. butter, her test beginning at one year, 350 days, and only nine months after completing her long voyage to that country. The two young sons of Inka are making good as service sires and are reflecting creditably upon their ancestry. One of these, May Echo Champion, is owned by the Young Street Syndicate, north of Toronto.

The claim of the owners of Inka Sylvia Beets Posch, that he is the greatest of Canadian sires cannot be disputed. His record as a sire is an excellent and his individual merit has only to be seen to be appreciated. The illustration at the head of this article does not do him justice, but it shows him to be a strong, alert and active bull of his constitution and capacity; the kind that leaves an impress of his merit upon his descendants.

Her Dam's Productivity

(Continued from page 20.)

sons, seven R. O. P. daughters and four R. O. P. sons. He was a grand-son of DeKol 2nd, the great foundation cow of the breed. His outstanding daughter was May Echo, with 23,707 lbs. milk and 1,041 lbs. butter in a 7 year, and 21,344 lbs. butter and 726.6 lbs. milk in seven days. These records made

her the Canadian champion, a place she held for a considerable length of time. Another good daughter of this bull was with 18,603.7 lbs. milk and \$33.64 lbs. butter in a year. He has five other daughters with over 20 lbs. butter.

The grand sire of May Echo on her dam's side was Stanley Duke. He was richly bred, but was in service before record work was established in Canada. Hence he has no official backing. Several good daughters, however, were sired by him, and when we remember that he was closely related to such cows as Evergreen March and Carmen Sylvia, we at once recognize his worth to the breed. Rosa May, the dam of May Echo, also left some good daughters. Besides two of her sisters have good R.O.M. records, considering that they were made in the early days of this work. The dam of Rosa May was Echo, who has three R. O. M. daughters of outstanding merit.

When we sum up the story told by the records of these animals, it makes plain the fact that May Echo had in her makeup certain good lines that were destined to make her and all her descendants famous. As an individual she impresses one in many ways. She is noted for her large, roomy heart girth, big digestive capacity, strong vitality and great mammary development. These qualities have gone down to her posterity with her name and her daughters' granddaughters resemble her in many ways. So marked is this that the writer, when visiting the Allison Stock Farm, where May Echo is enjoying her last days, was able to pick out some of her descendants by their resemblance to her. One of the strong features of the "old cow," as the boys affectionately call her, is that her udder is to-day in excellent condition, considering her age of 16 years on Dec. 9, 1916. There is no marked "breaking away," or any showing of pendulence.

The Progeny of May Echo.

The progeny of May Echo afford a subject of interesting study, because the evidence that this procrepancy dominates even when used with different sires. When she was three years old, she gave birth to May Echo Pieterje, from the sire Sir Pieterje Josephine Meachilde. This cow at four years gave 11,720.5 lbs. of milk. At four years of age she gave birth to May Echo Verbelte, the dam of May Echo Verbelte. The sire used was Verbelte 4th Count Calamity. May Echo Verbelte has a yearly record of 22,347.1 lbs. milk and 29.89 lbs. butter from 704 lbs. of milk in seven days. Mated in her tenth year with Inka Sylvia Beets Posch, the sire of May Echo Sylvia, May Echo gave birth to Lawncrest May Echo, a cow of great promise, whose record is given elsewhere in this article. Her last daughter, Riverdale May Echo Lyons, was from Sir Lyons Segis, and she has a two-year-old record of 495.2 lbs. milk and 22.40 lbs. butter in seven days. This record will, no doubt, be increased in the near future, as this young heifer has not yet reached the age of characteristic production.

A characteristic of the entire strain and one brought out forcibly in May Echo Sylvia, is that they do not reach the zenith of their production until about the sixth or seventh year, and this is continued in good form until well on to old age. Another noticeable feature is that demonstrated by May Echo Sylvia, is that their best production period is about the fifth or sixth week after freshening, this being about the time when the seven day records are made.

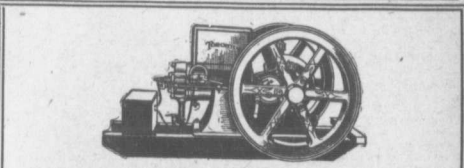
If space would permit, it would be profitable to trace the history of this strain down through the daughters and study their records and characteristics, but the example of May Echo Sylvia, a daughter of May Echo

Verbelte, gives us an index of their great possibilities. In her is exemplified the great productiveness of the family. By following her ancestral blood, we are able to see that her breeder obtained great results by working with nature and adhering to her laws and making them serve his ends. Together they have given to the world an unbeaten record of over 1005 lbs. of milk in seven days.

A Lesson.

If the study of the breeding and productiveness of May Echo Sylvia is to mean anything to us, it must be as an inspiration to so breed, select and develop the animals in our own charge that we can make progress along the road to achievement. One point clearly demonstrated in the bringing together of two strains from which sprang this great cow was that they "mixed." In this way she possesses in her makeup much of the good of two great strains, and it is making itself known in her production. To so choose the animals to be mated that the best in each can be concentrated in the offspring and at the same time eliminate much of the detrimental qualities is the sure mark of an intelligent breeder and one worthy of that high title.—W. G. O

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In Union There is Strength

Western Farmer's Organizations Amalgamate

A STEP fraught with great importance to the organized farmers' movement, not only in Western Canada, but in Ontario as well, was taken on Thursday, Nov. 20th, in Winnipeg, when the shareholders of the Grain Growers' Grain Company decided to unite with the shareholders of the Alberta Cooperative Elevator Company and form a new company, which will take over both of the old companies and be known as the United Grain Growers' Limited. The new company will be tremendously strong, having a capital of five million dollars.

This year the Grain Growers' Grain Company reported profits of almost \$600,000, and paid a war tax of over \$100,000. The Alberta Company had profits of over \$230,000. The new company will have about 25,000 shareholders. As yet the shareholders of the Saskatchewan Cooperative Elevator Company, which this year reported profits of nearly \$700,000, have not decided to affiliate, but it is expected that they will do so in due time. The suggestion that the shareholders of the United Farmers' Cooperative Company of Ontario may desire to affiliate later, was greeted with applause.

The Ontario delegates, R. H. Halbert, of Melancton; J. Z. Fraser, of Burford, and H. E. Cowan, of Farm and Dairy, have been having a busy time attending sessions of the Canadian Council of Agriculture and other meetings. As we write a conference between the leaders of the organized farmers and prominent business men on matters of mutual interest. The farmers, as usual, are doing themselves credit.

A Most Successful Year

PROFITS of \$571,465 were made by the Grain Growers' Grain Company in the past year. President T. A. Cramer, addressing representatives of the 18,000 farmer shareholders, said the year had been the most successful in the company's history.

The Grain Growers' Export Company, a subsidiary concern, made a profit of \$198,000. The Government's war tax on the Grain Growers' Grain Company's profits was \$104,000, and on the Export Company, for the past two years, \$160,900. In distributing profits the company paid out a 10 per cent. dividend, amounting to \$100,000 on the capital stock, and placed the balance to reserve account, which now totals \$600,000.

The company handled 46,000,000 bushels of grain during the year. The Manitoba Government elevators were operated very successfully by the company. In the meantime the company is running its own elevator system in the province, now having fourteen elevators.

The Alberta Farmers' Cooperative Elevator Company has just closed the year with a profit of \$282,000. It has 103 elevators in operation in that province, and ten thousand shareholders.

The Grain Growers' British Columbia Agency, a subsidiary company at New Westminster, had operated at a loss for the year, but at a profit for the past six months. The cooperative supply department made a small profit, handling machinery, twine, etc., to the value of more than \$1,250,000. More than 600 cars of live stock were handled.

In Western Canada at one time, the interests opposed to the organized farmers', employed a man at a salary of \$4,000 a year for three years to write

up articles running down the farmers' movement. The farmers found out about it, however, stood by their guns and won the fight. This is a chance for the farmers of Ontario to stand by their organization and to stand by the movement, which means so much for the agricultural success of Ontario.

Secretary Morrison in Brand County

THE Onondaga Farmers' Club held a special meeting on November 15. Mr. J. J. Morrison, of the United Farmers' Cooperative Company, entertained the members by a very profitable address, pointing out the position of the farmer to-day as compared with other organized industries. He emphasized the need of cooperation.

It was unfortunate that more members were not present, but owing to the short notice we had of Mr. Morrison being able to be present with well advertised. There were about 24 members out and a good measure of interest was shown. The community spirit of Onondaga has been noted for its prosperity and our farmers hardly felt the necessity of organized effort. They have shown some indifference and lack of confidence in the cooperative movement, largely because we were not familiar with the principles upon which business has been transacted. However, after Mr. Morrison clearing away the clouds of doubt we hope to hear of results from the Onondaga Farmers' Club, and assure the Secretary of a cordial welcome when he sees fit to come and address us again. —G. E. W.

B.C. Farmers Organizing

THE Vancouver Island Farmers' Association, as it is temporarily called, came into being early in November, and the speeches delivered at the organization meeting indicated that farmers are face to face with similar conditions there, as in the east. One man stated that in the recent election in British Columbia, 75 per cent. of the voters were directly interested in agriculture, yet they were entirely without provision for having their views as farmers influence the election. The enchantment of farming failed when men had to mortgage their farms in order to get along, said another speaker. Milk prices were cited as not being fair, the wide margin existing between farm and city prices being taken into consideration. "The farmer is the only person who lies down and does not fix the price on the article he sells," said another. "Merchants, Japanese, Chinese, even shoe blacks were organized." He favored appointing delegates who should go out and canvass every farmer's club on the Island.

An old labor unionist, now a farmer, stated that for 25 years he had paid \$2 a month for dues, but since at the end of the year he had been from \$25 to \$50 better off, he considered it a good investment, and urged that similar result could be secured by farmers. "The efforts of the union," said one prominent speaker, "should be directed to the task of educating ourselves to look after our own interests, to initiating and helping out in the working of a certain amount of cooperation where it is thought profitable, the farmers being represented by their accredited representatives, backed by the full force of their organization derived from pulling together."



CHRISTMAS GREETINGS

TO the many friends and patrons of the U. F. Cooperative Co. we extend our best wishes for the Xmas season. May the coming Xmas find you comfortable in mind, body and estate.

The year that is closing has been fraught with great issues for the U. F. Cooperative Co., but, thanks to the staunch support of the farmers of Ontario in their own organization, we have weathered all storms, and are in a better position than ever to give you of our best service during the coming year.

We have still some three weeks before the 25th, and our new Xmas Price List is completed. You will find it worth your while to have a copy.

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THE real Christmas tree is the tree of life, its branches spread over all lands; and its leaves are for the healing of the nations.—Amos R. Wells.

Winning the Wilderness

By Margaret Hill McCarter.

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CHAPTER I.

The Blessing of Asher.

Unless there is in the background a mother, no portrait of a man is complete.—Winston Churchill.

THE old Aydelot farm reached quite down to the little village of Cloverdale, from which it was separated by Clover Creek. But the Aydelot farmhouse stood a good half a mile away up the National pipe road toward the Virginia state line. The farm consisted of two long narrow strips of ground, bordering the road on either side and walled about by forests hiding stagnant marshes in their black-shadowed depths. Francis Aydelot had taken up the land from the Government before the townsite was thought of. Farming was not to his liking and his house had been an inn, doing a thriving business with great travellers going out along the National highway in ante-railway National stage coaches. But when the village took root days and grew into a little town, the village tavern absorbed the revenue from the travelling public, and Francis Aydelot had to perforce to earn his own hands to the plow and put his living hands to the land. It was never a labor of love with him, however, and although he grew well-to-do in the tillage, he resented the touch of the soil as something degrading.

Cloverdale did not grow toward him, because, out of prejudice at its being, he would not sell one foot of his land for town lot purposes. Nevertheless, since he was upright in all his dealings, the villagers grew proud of Francis, deferred to his judgment, quoted his opinions, and rated him generally the biggest asset of the community, with one exception. That exception was young Asher Aydelot, a pink-eyed boy, only son of the checked, gray-eyed man, and heir to all the House of Aydelot and heir to all the narrow acres from the wooded crest on the east to the clear waters of Clover Creek on the west. He was heir to more than these, however, if the heritage of ancestry counts for anything.

Jean Aydelot, the first of the name in America, driven from France by his family on account of his Huguenot beliefs, had settled in Virginia. He had quickly grasped the American ideals of freedom, while he admired the Cavaliers, something of the English staid easily with a Quaker girl, had lust in his blood, however, kept him from rooting too firmly at once. It happened that when a band of Quaker settlers had sought refuge in Virginia and was about to be driven out by the autoeratic Cavaliers, young Aydelot, out of love for a Quaker girl, had championed their cause vehemently, and he was so influential in the settlement that he might have succeeded, but for one family—the wealthy and aristocratic Thaines, through the son

of this family the final expulsion of these Quakers was accomplished. The woman in the case was Mercy Pennington, a pretty Quakeress with whom young Jerome Thaine fell in love, promising protection to all her people in return for her hand. When she refused his offer, the Thaines carried the day, and the Quakers again became exiles. Jean Aydelot followed them to Pennsylvania and married Mercy Pennington, who was promptly disowned by the Quaker Church for this marriage to one outside its membership.

In spite of all this heresy, however, the Aydelots became one of the leading families in the development of the colonies. Their descendants fell heir to the traits of their French-English forbears: freedom of belief, courage to follow a cause, a touch of the wild, the mercurial French mind, and the steady poise of the followers of the Inward Light. A trace of bit of the stern, the years, terms had come down the family history; a however, with the family history; a family-like resentment against the family of Jerome Thaine, of Virginia.

Francis Aydelot had crossed the

Alleghenies and settled in Ohio in frontier days. Here his life, like his narrow, woods-bound farm, was clean and open, but narrowed by surroundings and lack of opportunity. What had made for freedom and reform in his ancestors, in him became prejudice and stubborn will. Mrs. Aydelot was a broad-minded woman. Something of vision was in her clear gray eyes. Love of beauty, respect for learning, and an almost statesman-like grasp of civic duty and the trend of national progress were here, too.

From such ancestry came Asher Aydelot, the healthiest, happiest country boy that ever walked the echoes of the old Ohio woodlands, or dived the currents of her mad little rivers, or whistled fearlessly at the scampers down the dusty pipe road in the soft black summer nights.

Asher was just fifteen when the Civil War swept the nation off its feet. The Quaker spirit of Mercy Pennington made fighting repulsive to his father, but in Asher the old Huguenot courage of Jean Aydelot blazed forth, together with the rash patriotism of a young hot-blood whose life has been hemmed in too narrowly by the forest walls. Almost before Cloverdale knew there was a war, the Third Ohio Regiment was on its way to the front. Among its bearded men was one beardless youth, a round-faced drummer boy of fifteen, the only child of the big farmhouse beside the National road. In company with him was his boyhood chum, Jim Shirley, son of the Cloverdale tavern keeper.

An April sun was slipping behind the treetops, and the twilight mists were already rising above the creek. Francis Aydelot and his wife sat on the veranda watching Asher im in the glory of a military suit and brass buttons coming up the pipe with springing step.

"How strange is it! I'm glad he is at home again," the mother was saying.

"Yes, he's here to stay at last. I have his plans all settled," Francis Aydelot declared.

"But, Francis, a man must make

some plans for himself. Asher may not agree," Mrs. Aydelot spoke earnestly.

"How can our boy know as well as his father does what is best for him! He must agree, that's all. We have gone over this matter often enough together. I won't have any of that. Nobody knows where he is, just when his father needs him to take the care of the tavern off his hands."

"What made you Aydelot away from Cloverdale?" Mrs. Aydelot asked. "Nobody seems to know exactly. He left just before his brother, Frank, married that Leigh girl up in the Ohio valley somewhere. But everything's settled for Asher. He will be marry-

Our New Serial

AT last, after much deliberation, we have succeeded in securing a new serial for our folks. "Winning the Wilderness" will receive a warm reception from all of our readers. It is an intensely interesting story, the story of a young Ohio veteran of the civil war who braves his father's disapproval and marries a girl whom he met on a claim south. He has to face a claim far from a railroad, and endure all kinds of hardships, including drought of grasshoppers and real estate sharks, and, we have taken success through—but there we must not tell too much of the story. It is a good, wholesome story from start to finish, and we believe it will appeal to our folks as something really worth while reading. Do not fail to read every installment of this splendid story of farm life.

ing one of the Cloverdale girls pretty soon and stay right in town. We'll take it up with him now. There's no use waiting."

"And yet I wish we might wait till he speaks of it himself. Remember, he's been doing his own thinking in the time he's been away," the mother insisted.

Just then, Asher reached the corner of the door way. Catching sight of the two, he put his hands on the top of the paling fence, leaped on lightly over it, and came across to the veranda, where he sat down on the top step.

"Just getting in from town? The place hasn't changed much, has it?" the father asked. "No, not much," Asher replied absently, looking out with unseeing eyes at the lengthening woodland shadows, "a church or two more, some brick sidewalks, and a few stores and homes—just added on, not improved. I miss Jim Shirley everywhere. But some of the folks see the same. But some of the girls are pushing baby-carriages and the boys are getting round-shouldered and droopy-jawed."

He drew himself up with military steadiness as he spoke. "Well, you are glad to settle down anyhow," his father responded. "The old French spirit of roving and adventure has had its day with you, and now you will begin your life work." "Yes, I'm done with fighting." "Asher's lips tightened. "But what do you call my life work, father?"

It was the eighth April after the opening of the Civil War. Asher had just come home from two years of army service on the western plains. Few changes had come to the little community; but to the young man who eight springtimes ago, had gone out as a pink-checked drummer boy, the years had been full of change. He was now twenty-three, straight as an Indian, lean and muscular as a

(Continued on page 20.)



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THE UPWARD LOOK

Self-Mastery

LOOK not thou upon the wine when it is red, when it giveth its color in the cup, when it moveth itself aright. At the last it biteth

like a serpent, and stingeth like an adder. Prov. 23: 31 and 32.

In reading over these verses, what impressed me most was the word "look," at the beginning, and the vivid consequences described at the end of the verses. Solomon evidently understood the strength of temptation and the danger of running into it. He also knew the terrible results

of yielding. It was not safe even to look, for fear the temptation be too much, for the one not strong enough to resist.

In our town, prohibition has been enforced. Across the river the poison can be procured, where those that want it have to go. Before, they would go to a nearby corner store and afterwards stagger home in

whatever condition they were. Now many have to return by the car, where daily they are seen in a pitiable condition. The pity of it and the shame of it is that when temptation has been put so far away, they still pursue it.

About two years from now a great Temperance Plebescite will be taken. (Continued on page 31.)



Dumplings make the Stew

Weight for weight, dumplings are over five times as nutritious as beef. The gluten in the flour is "the lean of the meat of the wheat"—it is the muscle-building, blood-forming element. Made from FIVE ROSES flour, your stew dumplings contain the energy-building elements so plentifully stored up in the best Manitoba wheat.

Therefore, next stew day pop FIVE ROSES dumplings into the savoury mess. Besides jumping up its sustenance value *enormously*, your family will be gratefully sensible of a new deliciousness. Taste, economy, nutrition—all are served by using

Five Roses*
FLOUR for Breads-Cakes
Puddings-Pastries

How gratefully welcome are stew-days when FIVE ROSES makes the dumplings! Light and porous as the crumb of well-risen bread, airy fairy bits of toothsome nutrition.

Not for dumplings and puddings alone; but for bread, pies, biscuits, rolls and pastries, no other flour brings you that constant satisfaction so coveted by ambitious housewives.

It is so well liked that almost a million mothers will use no lesser flour than FIVE ROSES for all their baking.

Packed in bags of 7, 14, 24, 49 and 98 lbs. Or barrels of 196 and 98 lbs.

Your dealer can easily get FIVE ROSES for you.

LAKE OF THE WOODS MILLING COMPANY, LIMITED, MONTREAL.

MAKING DUMPLINGS FOR STEWS

15 minutes before the stew is done, put 1 pint FIVE ROSES in a bowl, add 3 teaspoon salt and 3 teaspoon baking powder. Stir and add sufficient milk just to moisten. Drop by spoonfuls into stew. Cover and cook 15 minutes without lifting lid. Cook the dumplings around edge of plate. All new flour moisture and pure. Twice this quantity for large family.

All about DUMPLINGS and PUDDINGS—Send to-day for the famous 144-page FIVE ROSES Cook Book. Gives over 240 tested cake recipes, and fully 50 infallible directions and hints on bread-making. Besides pages on biscuits and pastries. So indispensable that already over 200,000 ambitious housewives have sent for their own copy. Mailed on receipt of 10 two-cent stamps. Address Dept. D.

* GUARANTEED
NOT BLEACHED—NOT BLENDED.

When you
Think of Dumplings
Think of FIVE ROSES

Music, a Drawing Power in the House

What Music Means at the Christmas Season and During Winter Evenings —With the Household Editor

ONE of the most wonderful and long-anticipated events of Christmas Day is the Christmas dinner. We arise fairly early in the morning, the kiddies especially early, to get a peep at the mysterious parcels which are either bulging out of stockings or placed where they can be easily located. After all the parcels have been opened and compared upon and breakfast has been cleared away, it is not long before we start to watch the clock and wonder if it will not soon be dinner time, and by and by we sit down to a wonderful spread and enjoy the good things which mother has been preparing for days previously.

After the feasting is over the children play with the new toys or go out for a frolic in the snow. But what about the grown-up young folks and the uncles and aunts? How are we going to entertain them? From time immemorial music has been associated with the thought of Christmas. The voices of the angels heralded the advent of the first Christmas, and down through the ages have come to us the beautiful Christmas musical carols, without which Christmas

rests Mary plays for him or other members of the family gather round the piano and sing.

One of our editors has just related an incident which came to his attention not long ago, while on a trip through Elgin Co., Ont. He stopped at a farm house for dinner one day, which was located near the school, and the children were able to come home for dinner. After the meal it was suggested that the boy of 10 or 12 years play a selection on the piano before going back to school. Without making it necessary to coax the lad, his young sister went to the piano, selected a piece of music and conducted her brother to the instrument, where they played a splendid piano duet. This is but one instance of the enjoyment which can be derived in the home where there is an instrument and where the children have received some musical training.

Sometimes parents refuse to purchase a piano until they get more or farm machinery, build a new house, or probably pay off the mortgage. If they have an instrument in the home, they probably consider it a luxury to give their girl or boy lessons, and feel they cannot afford it. Surely this is



Christmas without music would be like June without the roses.

Oh, Daddy! Think of It! A WILLIAMS!

"I HAD wished so much for a piano, a really good piano. But to think Christmas Day should bring with it a WILLIAMS!"

Bless her little heart—she knows—every bright little girl knows, somehow, that music must be a part of life and living, and that its sweetest enjoyment means more than just having a piano.

It means the possession of a Williams, with its exquisite purity and richness of tone, its assured quality, its matchless beauty.

Thinking parents would as soon entrust their child's education to a harmful book as leave its musical training to a piano less perfect and sure than the

Williams Piano New Scale ENDORSED BY GREAT MUSICIANS

The gift of a Williams is a delicate compliment to your pride in your home and your children's welfare.

Think how the whole world honors the talented musician.

Think how music, in turn, honors its followers, bestowing a tenderness of spirit, a refinement of character, a joy and gladness of living, unattainable through any other phase of life.

Think, also, of the evenings you would come home to enjoy your little girl's progress and feel, through her, the thrill of musical attainment.

All these things, and more, urge now the importance of making this Christmas the occasion for commencing your little girl's musical education.

Distance or a limited pocket book are no hindrances to your family enjoying a Williams this Christmas. Tear out the coupon at once for the book of beautiful Williams Models and ask us to tell you how a little of your Christmas money NOW will put a Williams Piano or Player Piano in your home on Christmas Eve.

MAIL THIS NOW AND MAKE SURE YOU HAVE THE GIFT FOR CHRISTMAS.

The Williams Piano Co., Ltd.,
Oshawa, Ont.

Gentlemen:—Send me at once your book of WILLIAMS' Designs and tell me about your special Christmas easy payment plan. I am considering the purchase of a piano.

Name

Address

Passing a Pleasant Hour in the Home of one of Our Folks.

mas would not be the same. A splendid way, therefore, in which to pass a pleasant hour or two is by gathering around the piano and having a good old-time sing. Some of us who have not been doing much singing lately will probably surprise ourselves when we find that we still have a voice and can enter into the singing with vim and enthusiasm—that is, if we haven't eaten too much turkey.

Now when we are discussing this subject of music, it is not most deplorable to go into the farm home where at least one member of the family has not received some musical education? There is a drawing power in music, and if one of the family can play an instrument, many a long winter evening that might otherwise be passed heavily on in some instrumental music. How much easier it is to entertain company if we have the satisfaction of knowing that part of the time can be spent around the piano. There are so many boys in the country who are passionately fond of music, and by being able to induce them contentedly in their own family circle, it does much to keep them close to their own homes. Then, too, father comes in after a hard day's work, and is weary or worried over some business transaction, "Run in and play something, Mary," he says to his daughter, and while

a grave mistake. Music plays upon and develops the finer instincts of human nature. It is, therefore, one of the greatest assets in the home. It is of great value in any person's life, and the greatest asset in the home.

There are some families which are blessed with a very small amount of musical talent, and the parents feel that it would be money thrown away to invest in a piano which could not be put to good use. Even under these circumstances, if a piano is in the home it can be enjoyed when neighbors drop in who are musical. For the family without any musical talent, a great deal of pleasure can be derived from the now popular Victrola, and by having one of these instruments they can enjoy a wide range of music, such as selections by famous operatic artists, the lively strains of a band, beautiful old-time melodies or some of the popular airs.

Let us not neglect the musical side of our nature, but let us rather seek to inculcate into our home life as much music as possible. This is one way of making home pleasant for young folks, and as some one has said, "If you would not have your children lost to your married daughter you would have your married daughter remember the old home in their later years." If you would have your own home when it is needed—send them out into the world with the strong belief that there is no place like home.

Another of the joys of water, I

IT PAYS YOU

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"I saw your ad. in Farm and Dairy"

Homely Thoughts for Busy People

Marion Dallas, York Co., Ont.

ONCE more the changing seasons have brought us winter. The sun has crossed the equator in its journey south, leaving us with shorter days and longer nights, frosty mornings and cool evenings. The question has been asked, "Does this change affect our human system. Assuredly it does. Like passengers on a steamer crossing the Pacific Ocean, who must adjust themselves to the changes of climate they encounter, so we find it necessary to give some heed to the change of seasons.

It is commonly thought that all the change necessary, is to put on a little more clothing, close down the windows, light the fire, and we are ready for winter. There are other things which require our attention, if we regard our health. The first thing is fresh air. The problem of procuring fresh air is a difficult one, because the cold weather necessarily closes windows and doors. During the summer, and have become accustomed to plenty of fresh air. This supply of fresh air must be kept up. No matter about hazards and low temperature—fresh air must be had at any cost.

Well Ventilated Rooms.

The living rooms should be well ventilated. There are ventilators contrived which allow the air to enter the room without a direct draft. But for the benefit of those homes which do not boast of these, (and alas, there are many farm houses where ventilation is never considered) one can be made without much expense. A piece of board fitted to the lower sash, so that the length of the board is exactly the width of the window, will answer very well. The board should be about six inches wide. Raise the window and allow it to rest on the board so window. This will prevent the air between the two window frames, so that the air will be constantly entering the room, but there will be no draft in the living room where families spend most of their time, there should be two such windows arranged, and one in the bedroom.

An important part of our preparation for winter which is very often overlooked, is that of personal ventilation. A lot of clothes left in a bedroom will do much to foul the air. Woolen goods especially, absorb and retain the moisture from the body, and when they are not in use, should always be hung where they get sun and fresh air. Remember that the closets in the rooms need air.

Dangers From Stove Gas.

Another fact to be kept in mind is that the coal fire, whether it be a stove or grate, is constantly creating a poisonous carbonic acid gas. If the stove or grate is not allowed free draft, this poisonous gas is continually escaping into the room. There must be free vent of the air. It will be poisoned. DON'T FORGET THIS FACT. Scientists tell us, and common sense proves it, that a house which is well aired is easier to heat than one filled with warm dead air. DO LET IN LOTS OF SUNLIGHT.

The temperature of the rooms should be carefully looked after. Thermometers should hang in different parts of the house. The temperature of the sleeping rooms should be about 60 or 65 degrees Fahrenheit. In the living room the temperature should be allowed to reach 70, but never above 80.

The Use of Water.

Another essential thing at this time of the year, is the internal use of water. During the summer we use a

great deal of water. Perspiration has consumed large quantities of it, and the system has demanded drink. But now, perspiration is practically stopped. Much less water escapes from the system through the skin. This materially decreases the amount of thirst, but it does not decrease the amount of "poisonous" material that must be eliminated from the system. By means of perspiration most of the uric acid poisoning escapes through the skin, but now more of the poison must find exit through the kidneys. A sudden transferring of the function of the skin to the kidneys, endangers these very important organs. In cold weather we eat more solid food. This, too, increases the amount of poison that the kidneys must eliminate. Together with the fact that the skin renders less than usual assistance, winter is a very critical time for the kidneys, especially during the first few weeks of cold weather.

The kidneys ought to be assisted in this crisis. How can we assist them? Simply by drinking plenty of good cold water. A glass of cold water just before a meal is the best medicine in the world to assist these organs. Some people prefer to take hot water, but either hot or cold water will do. Dyspeptics will find hot water more of cold weather. A glass at bed time will not be out of place.

Cold Water Every Morning.

Cold water should be used every morning. Gargle the throat. Rinse out the mouth. Those who cannot take a cold bath every morning should splash the neck and chest with cold water, and for those suffering from nasal catarrh, sniffing cold water up the nose will be found useful. This fortifies the system against the action of the cold weather.

THESE PRECAUTIONS ARE NOT OVER DRAWN. They are just common prudence, and are absolutely necessary to avoid the many ailments that are directly due to changing from warm to cold weather. It is always dangerous to catch cold. The liability to chronic and fatal disease is greatly lessened if a cold can be avoided.

If people would allow themselves plenty of fresh air for the lungs, and pure water for the kidneys, catching cold would be almost a thing of the past, and families who are forever running for the doctor, would get through this winter with little or no sickness. It is worth a trial.

A Hand on Your Shoulder

James Whitcomb Riley.

When a man ain't got a cent,
And he's feeling kind of blue,
And the clouds hang dark and heavy
An' won't let the sunshine through,
It's a great thing, O my brethren,
To see a feller just to lay
His hand upon your shoulder
In a friendly sort o' way.

It makes a man feel curious,
It makes the tear drops start,
An' you sort o' feel a flutter
In the region of the heart;
You can look up and meet his eyes;
You don't know what to say
When his hand is on your shoulder
In a friendly sort o' way.

Oh, the world's a curious compound,
With its honors' and its gall,
With its cares and bitter crosses—
But a good word after all
An' a good God must have made it—
Leastways, that is what I say
When a hand is on my shoulder
In a friendly sort o' way.

As Pure and White

As the Christmas Snow



Our other Brands For Bread
Cherry Blossom
Pink Blossom
Mildew
Gold Crown
Newcom
Twin Valley
Fire Thistles
Swallowtail
For Pastry
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Reindeer Flour For Your Xmas Baking

That's just what flour ought to be, and that's what REINDEER is. Snowy white and pure, preserving the natural properties of our own Canadian wheat, and manufactured in Canada for Canadians. Use

and avoid the risk of disappointment. Too often the failures in baking are the result not so much of lack of skill on the part of the housewife, but rather in the inferior quality of the flour used. When you have once seen and tasted that pure snowy-white bread of the "just-right" texture, you will realize why Reindeer never loses a user.

For pastry we have special brands. Try our "DELIGHT" brand for your Christmas pastry. Just taste that rich, flaky result and you will immediately understand why we named it "DELIGHT." Order a bag to-night and try it for your Christmas baking. Your grocer keeps it.

Peterboro Cereal Co. Limited

Peterboro, Ontario

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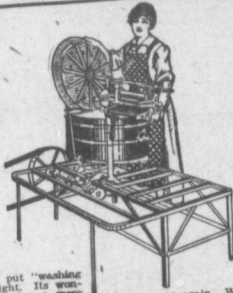
What Shall I Give for a Xmas Present ?

WITH the approach of Christmas the Xmas presents looms large on the mental horizon of most people, and it is a problem, too, we all admit, just to find the right kind of gift—a gift that is appreciated by the recipient and at the same time reflects the good taste of the giver. We have a suggestion that meets both these requirements—give a year's subscription at only \$1.00 to Farm and Dairy. It will be a perpetual reminder of the giver and a year's delight to the receiver. Do it now when you remember.

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Farm & Dairy - - Peterboro, Ont.

It's just fun--- washing with this machine

It's good business to use a gasoline engine for running a pumping outfit or for operating a wood saw--then it's good business to make that same outfit run a Washing Machine. Your wife doesn't like to do any work any more than you do. She will welcome the arrival of a



PAGE WASHER

This is the machine that has put "washing by power" in an entirely new light. Its wonderful simplicity makes its operation a mere question of putting the clothes in the tub and taking them out again. We would like to tell you the complete story of this splendid machine. If you do not write for the booklet describing it

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Between Ourselves

WE present you herewith our "9th Annual Breeders' and Xmas Number."

We trust it meets with your approval. It has been our aim to give you in this issue the best we could produce. We have risen early and sat up late working and planning this issue for "Our Folks." We have talked much and hoped more for this Xmas Number of Farm and Dairy. That the finished product justifies our "talk" we are vain enough to believe, and an expression of your appreciation, should you think so, will realize our hopes.

Won't you just drop us a line and tell us what you think of this issue of Farm and Dairy, and its fact of an issue. Tell us frankly of our weak points. We value your opinions and your criticisms. They strengthen our hands and enable us to give you better service. We have striven to make Farm and Dairy the most reliable farm publication in Canada. Our advertising columns are as carefully edited as our editorial pages, and every advertiser using Farm and Dairy's pages is guaranteed reliable. We endeavor to permit nothing that is objectionable or in any way detrimental to the best interests of any of "Our Folks" to appear in our pages. It is this confidence that the readers have in our publication that makes Farm and Dairy a welcome visitor each week in almost 25,000 of the dairy homes of Canada and makes it at the same time one of the finest mediums in the farming field for carrying the messages of the many large advertisers who use our pages.

Rural Publishing Company
Peterboro, Ontario

CHRISTMAS TALKS



Economical Christmas Recipes

Lillian G. Crummy.
THE year has rolled around, bringing Christmas near again. All sorts of plans are being made for the festive season, chief among them perhaps being those made in the kitchen by the housewife and her daughters. It is the custom at our larders time of the year to have our larders exceptionally full of all kinds of delicacies. But this year everything we use in cookery is so expensive, butter and eggs especially being worth almost their weight in gold, that perhaps it would be wise to economize as far as we can. Below are a few economical recipes:

- Kisses.**
One egg, one cup of sugar, one-half cup butter, one-half cup milk, one teaspoonful cream of tartar, one-half teaspoon soda, flour enough to make a stiff dough. Drop on tins, sprinkle with powdered sugar. Bake in a quick oven.
- Jelly Roll.**
Two eggs, one cup granulated sugar, four tablespoons water, two teaspoonful baking powder and one cup of flour. If soda and cream of tartar is used, take one teaspoonful of the former and two of the latter.
- Apple Snow.**
Take two cups of apple (sour) sauce, cooked as dry as possible. Squeeze through sieve and sweeten. Add the white of one egg beaten stiff and beat briskly. Put in a fancy dish and over it heap whipped cream or garnish with amber jelly.
- Christmas Pudding.**
Two eggs, one and one-half cups currants, one and one-half cups suet, raisins, one and one-half cups molasses, one-half cup sugar, one cup cream, one-half cup milk, four cups flour, one teaspoon soda, one teaspoon cream of tartar, nutmeg and cinnamon to taste. Boil or steam three hours. Sauce to suit the taste.
- Doughnuts (delicious).**
One egg, one cup sugar, two small teaspoons soda, four small teaspoons cream of tartar, one cup fresh, sweet milk, one cup cream, nutmeg to taste, four cups flour. This will make about five dozen.
- Turkey Dressing.**
One cup bread crumbs, moisten with hot water, add salt, one egg, sage and sweet marjoram, mixed. Mix well and put in breast of fowl. Serve cranberry sauce with turkey.
- Goose Stuffing.**
Take two teaspoonfuls of chopped onion, one cup dry bread crumbs, one cup chopped apples, one teaspoon sage, one-quarter teaspoon salt. Mix well. Serve apple sauce with goose.
- Plain Fruit Cake.**
One cup white sugar and one lb. butter beaten to a cream, one-half lb. currants, one-half lb. raisins, one cup milk, three eggs, three cups flour, three teaspoonfuls baking powder. Pour into a dish with greased paper on bottom and bake one hour. (put grate in bottom of oven).
- Salmon Loaf.**
Take one can salmon, flake it fine, remove all skin and bones. Beat two

eggs until light, add the juice of one lemon, two tablespoonfuls melted butter, one cup fine cracker crumbs, and one half cup water. Mix these ingredients thoroughly with the salmon. Season with pepper and salt, pack firmly into a buttered tin, and bake in a moderate oven for a quarter of an hour. When done, turn out on a platter. Serve cold.

The Following is a Good Christmas Dinner Menu.

- Roast turkey, potatoes, celery, bread sauce, cranberry sauce, corn, olives, fruit salad.
- Pump pudding or mince pie, raisins, nuts, fruit, bonbons, etc., and coffee.
- Consomme is a soup served as an introduction to state dinners and is made as follows:
Take about three quarts meat stock, clarify by removing all the fat, then into it beat the white of an egg. When egg begins to curdle or congeal, strain the hot liquid through thick cotton or a linen cloth. Put back on stove and boil, seasoning with desired flavoring, salt, bay leaves, cloves, such as thyme, sage, parsley, etc. Put seasoning into a little cheese-cloth bag and drop into boiling stock.

Christmas Gifts in War Time

Mrs. A. McNeil, Peterboro Co., Ont.

SHOULD we continue the custom of giving Christmas presents during wartime? The approach of Christmas brings this question before us all. And it is a serious one, too, especially to those who are taking to heart the insistent cry of the allied governments for strict economy. Whether strict economy should involve abstinence from the usual giving at this season, is the point to be settled at once. Personally, I believe it involves no such thing. The whole spirit of our course liberality to those at the front comes first, but after that obligation has been fulfilled, the ordinary giving should continue as liberally as before--more liberally, but on a different basis.

In the first place, I will mention the ease of those in different circumstances, who are in the habit of giving costly presents to well-to-do relatives and friends. At any time, this kind of giving is mere folly, and in wartime, it is a crime. Now is the opportunity to break the habit once and for all. After all, to give a \$20 and for all. After all, to give a \$20 and for all. After all, to give a \$20 and for all.

I would suggest the giving of some quite simple, inexpensive, but carefully chosen article, accompanied by a note explaining that you are cutting out all expensive presents in order that you may give so as to include many of those to whom presents at Christmas are a real boon. This gift may come as a real boon. This gift may come as a real boon. This gift may come as a real boon.

(Continued on page 31.)

Opinions of Our Folks on "Money and Marriage" Question

ONE of the most difficult tasks with which we have been confronted recently has been that of coming to a decision as to which contribution should receive first place in connection with our contest on "How Much Money Should a Man Have Before Asking a Girl to Marry Him?" This contest has aroused a great deal of interest amongst Our Folks, and almost every mail has brought us the opinions of several. Many have written under non-descript names, and while we always prefer to have a letter appear under the name of the contributor, in the case of this contest we are allowing the letters to go through in this way.

In announcing the decision of the judges we would state that a tie was declared in favor of the letters from "Bachelor Boy," "Cousin Amy" and "Bachelor Boy" for first place, and we will be pleased to extend the subscriptions of these contributors for one year. We have many other interesting letters, and will publish as many as possible in this issue and in issues in the near future.

Circumstances Alter Cases

"Bachelor Boy," Lambton Co., Ont. THE subject under discussion is a very broad one, and leaves ample room for argument. From my viewpoint, there can be no hard and fast rule laid down as to what money or property a man shall possess before asking a girl to become his wife. Circumstances alter cases. Different walks or callings in life require different amounts of capital in order to make them a comparatively safe investment.

There is only one point on which I would lay emphasis, and that is the necessity of having a home which the young couple can really call their own and where the wife feels that she is sole mistress, even though that home be only a shanty with one room. A girl should not be asked to go into a home and cast in her lot with her husband's people. Many a home has been wrecked in this way and a barrier raised that time could not erase. Do not assist a young couple who started out in life with the best intentions.

A man should certainly have a home provided to a degree of comfort, but not luxurious, before asking a girl to share it. Should a girl share in the planning and building of a home? I think so. Does not all creation teach us that such is the law of nature? As we watch the birds in springtime do we not see in them an example of that spirit of unity? The first thing he did to find the home and then get the bird to help feather the nest. A wife who is not willing to do so is not a true helpmate. There should be joy in sacrifice on the part of both in their efforts to secure certain articles for the home. In this way, also, there is not the tendency to speak of things in the possessive singular as "mine," instead of "ours." Although I have said that it is the duty of a girl to help build up a home, I do not wish it to be understood that she should start on a mere nothing. If it is possible, the girl should be allowed to do part of the planning beforehand as well as after.

The financial side depends mostly on circumstances. I do not think a man should expect a girl to marry him until he is able to support her in some degree of comfort, as lack of financial hardships and disappointments will oftentimes play havoc with a good disposition, especially if the girl is placed in a different environment from that to which she has been accustomed.

If love is the ruling power in both sexes, which is the only safe plan, fin-

ance may be considered as a small part of the agreement. If in the case of a laboring man or one with a trade, I should say that a few hundred dollars may suffice to make a start. Be he a business man, a professional man, or a farmer, more capital is required. Above all things, there should be a unity of spirit, born of love. Be sure that the man you have chosen is a captain in whom you can place all confidence and the girl of your choice a true helpmate. Then, as you set sail on the matrimonial voyage of life, whether it be calm or stormy, joyful or sorrowful (and all will come), there will be that consciousness that all is well with a strong arm at the helm.

Personal Experience Given

"Cousin Amy," Brant Co., Ont. BELIEVE in young people marrying on small capital, and working and planning together for the comforts and pleasures of the home. We started with a capital of \$500 all told. There is the old saying, that two heads are better than one, and often, by working together, we have been able to plan and do better than if either were working alone.

Some money was spent in furnishing the farm and home with necessities, that, had we been single, would have gone to having a good time, or been spent on things that after marriage are considered unnecessary, as the men have a place to spend their evenings and a new interest. By this I do not mean that our social life has been neglected. We have entered a new sphere and can enjoy social evenings with our neighbors and friends that before we were married were not thought of. Then, too, there is the pleasure of entertaining for yourself in your own home.

We have also had the pleasure of planning together the furnishings of our home as to which suited our surroundings and tastes. On the other hand, if young people wait until the home has been provided, perhaps many years have been spent and love in that time sometimes wanes. They do not find the same pleasure in each other's company that they would have had earlier in life. Then, too, the woman going into the furnished home finds things that, had her tastes been consulted, would have been different, and a lot of her pleasure is lost in selecting home furnishings.

There have been those who, after waiting years to get worthwhile and have at last married, who said they wished they had married years before. They would have been better off financially and have had more real pleasure in life.

When a girl marries a man with money, it is often said, and indeed it is sometimes true, that she married for his money. A marriage of this kind is more often a failure than when the struggle has held the two together in a common interest. Wealth brings its cares. I could quote several cases where girls married in to wealth and in most of them there is not the same feeling of fellowship and goodwill that exists between those who have struggled together for their homes and its comforts. So I would say, from what I have seen, "marry and work, as there is pleasure and happiness in honest toil."

Neither Poverty Nor Riches

Mrs. M. D. Reid, Oxford Co., Ont. MARRIED life is team work and the first few years are spent in learning to pull a fair share of the load. If a man has a good home



A Hint for Christmas Cake and Candy making

You realize what an important part Sugar plays in Christmas goodies. Make success a certainty by ordering a 10, 20 or 100 lb. bag of

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"THE ALL-PURPOSE SUGAR"

LANTIC is specially good for cake-baking because the 'fine' granulation creams up quickly with the butter and saves much of the labor of long beating.



Christmas Recipes Free

Send us a red ball trademark, cut from a bag or carton, and we will send you FREE a LANTIC SUGAR Recipe Book, telling you how to make new and delicious cakes, confections and desserts.

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Atlantic Sugar Refiners Limited
Power Building, Montreal

and everything ready for his wife, she does not have the same incentive to learn to pull with her husband as she has when she is to help make the home. On the other hand, if the man has nothing ready, the pulling is so hard that she is apt to get discouraged and give up trying. Therefore, the best time to marry is when a man is young and strong, able to pull, and has a working start financially. What is a working start? That de-

pends on the man. If he has a good education and through his own efforts has accumulated a thousand dollars in some form of savings by the time he is twenty-five he could be trusted. But to start life on a rented farm, own a man should have, at least three thousand dollars, about half in stock and implements and half in cash. With that start there will be plenty of planning and economizing to teach him and his wife to pull to-

HOME CLUB

Getting the Most Out of Christmas

DO you realize that Christmas is almost here again? And as with farming, people, holidays are necessarily few, of course we want to make the most of each one. How would it do for us to exchange ideas on the subject? I'll begin by giving mine. I'm afraid I am not particularly noted for bright and original ideas, but such as they are, I am always willing to pass them along.

Some years ago I began to stop sending presents to people just because they had given to me the year before, and tried instead to give some tiny gift or two to people who did not expect it; to those, if possible, who had no one to make Christmas a merry time for them. We always had a Christmas tree for the school, and it was easy to do this without being sometimes pure fun, and never a disappointment in the result.

Of course, I think there is nothing that can give the same returns in happiness as playing Santa to little ones, your own or others; and in any case, the gifts should not be expensive. Even tiny tots seem to know that there is more in the spirit of giving than in the amount given.

You can keep yourself feeling sort of Christmasy the year round by planning for and gathering up your gifts gradually. Just keep your ears open, and you are pretty sure to hear your friends express a wish for something it is in your power to bestow. You will want to hug yourself every time you make such a discovery, and as your parcels keep collecting, you'll glow over them like a miser over his gold. Then, too, you will escape the hurried, thoughtless shopping at the last moment, when you are forced to dash at random, and despatch in hot haste, while your mind is in a flutter and your body in utter weariness. It is this that makes Christmas a time to be dreaded.

I have read and enjoyed the letters on winter reading which have appeared in the Home Club. I hope "Perplexity" will write again soon, and tell us that her sky is clear. Just one tiny bit of advice I have to offer to "Perplexity": Beware of getting into the way of feeling sorry for yourself. In that way lies misery, if not madness. Remember the old saying: "The merry heart does all the day, the sad one tires in a mile-a."

Now here's wishing you all, and our good editor, a Merry Christmas and a Good New Year.—"Merry Margaret."

Self Mastery

(Continued from page 25.)

In the meanwhile, all those who have this great cause really at heart will be praying and working hard study and work will be necessary, so that the unenlightened may be informed; the half-hearted, encouraged; the narrow-minded, broadened; the anti-narrow-minded, converted; The awful results almost every day of our lives, not only in the case of their victims, but also their suffering families.

One of the saddest sights, that will never be forgotten, was that of an exceedingly intoxicated woman with a tiny girl in her lap, in a crowded car. The woman, at the previous stage, was explaining to fellow passengers what she had to suffer from a drunken husband. In the midst of this, the voice of her little one would speak in a sweet, clear, heard distinctly by everyone. "Where is

my daddy, mamma?" Over and over again, in the midst of the maudlin talk, would come that childish trouble. Where was that father and where, too often, are other fathers, blighting the future of the lives of their innocent children, for whose sake they should be all that is best in life.—I. H. N.

Christmas Gifts in War Time

(Continued from page 28.)

tone is not at all likely to be misunderstood, and the chances are all for the simple gift being as much appreciated as the costly one, especially if the former has about it the personal touch. Rich folk are apt to find great charms in simplicity, just as pampered children almost invariably weep at least of their elaborate playthings and place their affection on some cheap little toy.

This rule of simple giving applies to all classes of people, and when accompanied by careful selection and an enlarged sphere of generosity, will be found to preserve the true spirit of Christmas even better than the old way. I would lay emphasis on the importance of careful selection, for therein lies real economy, rather than in abstaining from giving. Waste is more than ever before to be avoided, so it is well to be sure that one's gift, however trifling, will be suitable and acceptable to the recipient.

I might add that a chatty letter never comes amiss at Christmas time, and will greatly enhance the value of any trifle that may accompany it. The whole case for Christmas giving may be summed up in four words, which will hold good not only for this year but for all years.—"Wider giving—wiser giving."

Cooperation a Necessary Factor

Mrs. H. Greer, Toronto, Ont.

MR. HART, of the Cooperation Branch of the Department of Agriculture, is very anxious to have cooperative societies throughout the country. Anyone who is interested in this matter should write Mr. Hart and get more information on the subject.

It is time that the consumer was brought more closely in touch with the producer, because if we cannot do this we are not going to be able to live. In some cities from 17 to 25 per cent. of the eggs received go into the sewer, and tons of butter received are not fit for use. In these cooperative societies, the producer has to be an efficient producer, and it is just as easy to make a good article as a bad one. In the cooperative society, too, bad eggs are going to bring just the same price that bad eggs are worth. The same is the case with butter. This is a step in the right direction. It is no incentive to a good producer to make a good article when he does not get a better price for it than that received by the inefficient producer.—Extract from an address.

The teacher, wishing to impress on her pupils' minds the vast population of Canada, said "Think children, two Chinamen die every time you draw a breath."

A minute later, her attention was attracted to little Jimmie James, who stood puffing vigorously, with face reddened and cheeks distended. "What is the matter, Jimmy?" asked the teacher. "What are you doing?" "Nothing," Miss Mary; "just killing" Chinamen."

It is difficult at times to prevent a fruit cake from burning when it has to bake for a considerable length of time. Some housewives follow the plan of steaming their pudding until cooked and then drying it out in the oven.

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Remove blemishes and stop the lameness, so that you can get the top price at the sale or have sound, strong horses for next season's work. The time to do this is NOW, and the best liniment I know of for the purpose is



ABSORBINE

Absorbine is used by successful breeders year after year. To the owner of high-grade stock, the first requisite for a liniment is that it shall be absolutely safe, and no matter how carefully used, cannot injure the animal. Absorbine is purely herbal and can do no harm. It does not blister or remove the hair and results—the liniment must always have quick, take out inflammation and soreness and tissue. It must be healing, cooling, soothing and strengthening. In addition Absorbine is a positive antiseptic and germicide and when applied to all irritated surfaces, sores, cuts, and lacerations, it kills any germs that may be present; makes the part aseptically clean and causes a healthy healing.

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ADVERTISE In these popular columns which will be read and so profitable—costs you only \$1.68 a inch.

FARM AND DAIRY

Winning the Wilderness

(Continued from page 30.)

you are to go into the Shirley House as proprietor I suppose Cloverdale will take it as a concession of Providence in their favor, and you can live like a gentleman."

"But, father, I've always liked the country best. Don't you remember how Jim Shirley was always out here instead of my going down town when we were boys?"

"You are only a boy, now, Asher, and this is all I'll hear to your doing. You ought to be thankful for having such a chance open to you. I have leased the farm for five years and you don't want to be a hired man at twenty dollars a month, I reckon. Of course, the farm will be yours some day, unless you take a notion to run off to Virginia and marry a Thaine."

The last words were said jokingly, but Asher's mother saw a sudden hardening of the lines of his face as he sat looking out at the darkening landscape.

There was only a faint glow in the west now. The fields toward Cloverdale were wrapped in twilight shadows. Behind the eastern tree-rows the red disk of the rising moon tops the horizon, as he spoke. Asher waited long before he spoke. At length, he turned toward his father with a certain stiffening of his form, and each felt a space widening gulch-wise between them.

"You stayed at home and grew rich, Father."

"Well?"

"The father's voice cut like a steel edge. He saw only opposition to his will here, but the mother forecasted the end from that moment."

"Father, war rives us to see bigger things than hatred between two sections of the country. There is education in it, too. That is a part of the compensation. Once, when our regiment was captured and starved, our Fifty-fourth Virginia boys saved our

lives by feeding us the best supper I ever tasted. And a Rebel girl—" he broke off suddenly. "What are you trying to say?" queried the older man.

"I'm trying to show you that I can not sit down here in the Shirley House and play mine host any more than I could," he hesitated. "No, Cloverdale girl on demand. No, Cloverdale girl would have me so. I've seen too much of the country for such a position, Father. Let the men who staid at home do the little jobs."

He had not meant to say all this, but the stretch of boundless green prairies stole his eyes, the memory of her heroic action where men utterly forgot themselves was in his mind, makgot himself was in his mind, makgot himself was in his mind, makgot life in that little Ohio settlement seem only a boy's pastime, to be put away with other childish things, While night and day, in the battle clamor, in the little college class room, on boundless prairie billows, among lonely sand dunes—everywhere, he carried the memory of the gentle touch of the hand of a rebel girl, who had visited him when he was sick and in prison. And withal, he resented dictation, as all the Aydelots and Pennintorns before him had done.

"What do you propose to do?" his father asked.

"I don't know yet what I can do. I only know what I cannot do."

"And that is—"

"Just what I have said. I cannot be a tavern keeper here the rest of my life with nothing to do half of the time except to watch the men pitch horseshoes behind the Blacksmith shop, and to get a man to clean the windows on summer afternoons; and everything else so quiet and dead, you don't know whether you are on the street or in the graveyard. If you'd understand why."

(To be Continued.)

The Activities of a Breeders' Club

Sales are Held, the Interests of the Breed Safeguarded and Advanced and Good Fellowship Among Members Promoted—Jacob Leuzler, Oxford Co., Ont.

IN the early eighties of last century, three men got together and conceived the organization of what later proved to be the greatest transportation company in the world. Donald Smith, later Lord Strathcona, knew the West as few men in his time and had the master mind to grasp its possibilities. Sandford Fleming, the unknown engineer, knew how to construct railroads. William Van Horne, the genial, happy-go-lucky interest capital. No one of them, however great their abilities, was complete without the others. If each one had undertaken the work separately, no doubt they would all have failed; but by cooperation, each one doing his part, each confidently trusting the other, they brought into being the great Canadian Pacific Railway.

As the founders of the C. P. R. limited others to a certain extent, so others have imitated them, and find nearly all, if not all, the great enterprises depend on the coordinated efforts of many men. When the orange growers of California found that their orange and lemon groves were not paying a fair price of patient toiling, they found out that they were charging such exorbitant rates that neither the railroads nor the growers was making any way nor the growers got to thing out of it. The growers got together; improved their methods of packing; pursued an intelligent method of advertising, compelled the railways to give them fair rates and improved their methods of selling. The natural result is that citrus growers are making more money; that the railways, notwithstanding the great reduction in rates, are making much more money and the world at large is getting the better oranges. This, I believe, was the first successful attempt of the tillers of the soil in cooperation on such a large scale. Others are following suit.

The Ontario Farmers of Western Canada's Association of Western farmers have banded together and made the world take notice of them. The United Farmers of Ontario, is an organization that is destined to do for Ontario farmers what its sister organization has done for the West.

Breeders' Clubs Cooperative.

The organization of breeders' Clubs is another phase of cooperative work. The Oxford breeders' Club, of which I am a member, is a good example of this work. One object of the club is to meet prior to the annual meeting of the Holstein Breeders' of Canada, so that members may discuss anything that might be of interest at that meeting. Another is to meet together and thereby lessening with each other, and creating a feeling of distrust will. In this, our club has been very successful. The advertisement of the breed in Oxford county has

One Tea-spoonful

of "SALADA" for every two cups—boiling water—and five minutes' infusion will produce a most delicious and invigorating beverage.

SEND FOR A TRIAL PACKET

Mail us a postal saying how much you now pay for ordinary tea, and the brand you prefer—Black, Mixed or Green.

"SALADA" TORONTO.

TEA

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Thomas Chalmers, the famous baritone of the Boston National Grand Opera, is not listening to himself. He is singing, note by note, in direct comparison with Edison's marvellous Re-Creation of his voice.

Two Hundred Thousand Music Lovers

in the principal cities on this continent have listened to this direct comparison, and have been unable to distinguish between the living, breathing voice of the singer and Edison's wonderful Re-Creation of it.

The NEW EDISON

Re-Creates all forms of music with absolute fidelity.

It is not a talking machine. It does not merely reproduce sound. It Re-Creates music. In this respect, it is—as the greatest critics have pronounced—the world's most wonderful musical instrument.

Do you want to know more about Mr. Edison's marvellous invention, which one of the musical critics describes as "the Phonograph with a soul"? If so, send us for a copy of the brochure, "Music's Re-Creation", and the booklet "What The Critics Say". 61

Thos. A. Edison Inc., Dept. 7659 Orange, N. J.

DEAL WITH Farm & Dairy's Advertisers

been one of the objects aimed at, though in this we have not had the success desired. Our membership fee is only one dollar and after a few expense items are paid, there is not enough left to effectively advertise. If the fee had been put at five dollars, a conspicuous display in the advertising columns of the farm press could have been maintained.

The Club Sales.

Perhaps the most important feature of our club's work has been the holding of sales to dispose of surplus stock. The club is safeguarded in not being in any measure responsible for the sale, though every member of the sale must be a member of the club. Here is where cooperation, good fellowship and high principles that characterize the club's activities, have shown themselves to the greatest advantage. Only in one instance has the complaint of a buyer been passed upon those in authority who did not succeed. In other words, of the hundreds of buyers of cattle at our auction sales, only one buyer has been unsuccessful in convincing the sales committee that he should be relieved of his purchase. On the other hand, each succeeding sale sees some new rule added that more rigorously binds the seller and the occasional drooping but a con- signor speaks volumes for the quiet determination of our members that at all costs the confidence of the buying public must be maintained. Good fellowship is in evidence at every sale held by the club. The writer has yet to see the first sign of anything but friendliness among the breeders at these sales. In co- operation, we are in as complete accord as we can be. The feed is bought by the committee appointed for that purpose and one is charged pro rata, according to the number of animals he has in the sale. This arrangement has been very satisfactory. The advertising and general expenses are deducted pro rata, according to the animals consigned. All transfers are in the secretary's hands on the morning of the sale. The secretary-treasurer collects all moneys and notes for cattle sold at the sale and each member binds himself to share pro rata to the money he has received, the loss or non-payment of any note or check.

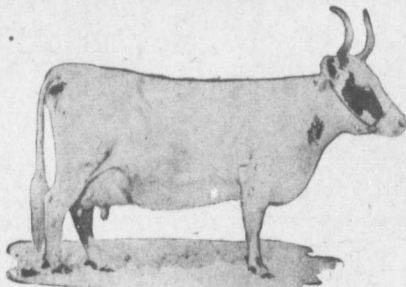
Good Fellowship Promoted.

As one of the objects of a breed organization is to create an intelligent 'good will' among the breeders, because the farther less successfully removed they are from jealousy of their more successful neighbors, the more they will profit by coming into contact with them. Instead of jealousy, they should have an enquiring mind, endeavoring to find out and adopt the methods of the more successful.

Breeders' organizations should aim at a proper development of the conditions surrounding their business rather than at creating abnormal conditions, such as securing high prices for animals that have not the genuine worth; for a high price too often taken as an indication of the value. They should aim at creating a real value rather than a frenzied one. The exchanging of bulls that have shown real merit is one of the objects that should receive more attention than has been given it. Another thing that has not received enough attention is that breeders do not visit each other enough. A pleasant way would be to have an annual visit in June to some of the best breeders. The advent of the automobile has made this possible and a number of places could be visited each year with short lectures on some of the best animals in each herd. This would constitute both a pleasant outing and an instructive course.

FARM AND DAIRY

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THE type and producing ability of our herd is indicated in "Lucky Girl," who qualified in R.O.P. with 17,000 lbs. milk of 4.2 test. The cut shows her at 14 years of age—wonderful conformation and wearing stamina.

At present we are able to offer a number of splendid females of this strain. Then in young sires we have some beauties by that great show sire, Hobland Masterpiece, and from daughters and granddaughters of Lucky Girl, Aucherbrain Fanny, daughters of Maggie Finlayston, Aucherbrain Delcity, and numerous other R.O.P. cows. Write us your needs or visit our big herd.

We are planning to import azaala next spring, and will be able to fill any orders entrusted to us.

Write—

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Manufacturers of Canadian Flax Seed Products
MONTREAL, QUEBEC

Feeding Axioms for Practical Dairymen

Feed What You Grow and More if Necessary—Jas. A. Caskey, Hastings Co., Ont.

FOR the average dairyman I believe a good motto to have in the stable is: "Feed what you grow." By following this motto he will be able to maintain the fertility of his farm, for then all he sells off will be the finished dairy products and by-products. Of course some will say, "What! feed any wheat to cows!" But this is the exception that proves the rule. If he sells his wheat he will be acting wisely, for bran is on the basis with which all concentrates for dairy feeding should be: "Grow His alfalfa and red clover hay just all the alfalfa and red clover hay you can." By far the cheapest sources of the protein are these legumes. His third motto should be: "Aim to have enough ensilage to keep the cows satisfied both winter and summer," for though ensilage is to some extent only a filler, when the pastures are short in summer, it is the cheapest of all milking crops, as well as the best.

There are dairymen who would add to the first motto: "Grow what you feed." So far as this is practicable, I would advise one and all to do so, but there are certain feeds necessary to balance up a cow's ration that the farm does not supply. Then, too, we have to buy substitutes. As long as the dairymen can see a profit should not hesitate to buy concentrated feeds. The best of these, when used in proper quantities, is clover meal, for it is not only a food but a conditioner as well.

All good dairymen learn that a cow to do her best must have a certain period of rest, and experience has

taught me that six weeks is not too long. It is during the rest period that a cow prepares for her coming year's work. She should be fed liberally on a good laxative ration during this period. The ration best suited to the average dairymen is two hundred-weight of bran, two of chop dry-corn weight of bran, two of chop dry-corn weight of the home-grown grains that the farmer raises, and the greater the mixture the better, with enough oil-cake to make it laxative, say from 50 to 100 pounds. These should be mixed together. When pregnancy becomes advanced, gradually reduce the meal ration, until by the time the cow freshens she is consuming nothing but bran with a very little oil cake. This will tend to prevent a feverish condition of the cow. For roughage she should have ensilage, all that she will eat with a relish, and all the good clover or alfalfa hay she will eat. In case of or barley straw is not to be despised, and two scoops of roots a day will make the demands for oil cake less. After she calves—when nature shows the cow is right—commence feeding a little more bran. Right here I wish to emphasize a word of warning: Do not increase a cow's ration too fast; gradually add the ingredients you have, and in no case raise her feed more than a pound of meal a day, until you have her eating one pound of meal mixture for every four pounds of milk she is giving. Let her meal ration now be a balanced one, and see that she has plenty of water, together with good ensilage and alfalfa or clover hay. If you have a good one, she will pay you well for all your feed and care. These I believe to be the essentials in feeding dairy cows.

Give them "Good Luck" Calf Meal and Watch Them Thrive

"Good Luck" Calf Meal is noted for its richness and absolute safety, and is an ideal substitute for milk for young calves. Try it on your young stock and note the results.

"Good Luck" Cotton Seed Meal

produces a large quantity of high quality milk at a low cost. Many breeders and dairymen are puzzled at this season to account for the lessened production of their herd, with a consequent reduction in the milk cheque. The question is largely a matter of the right kind of feed. "Good Luck" Cotton Seed Meal is guaranteed to contain not less than 41% of protein. We also supply Flax Seed, Gluten Meal, Oil Cake Meal, Cr. Corn, Whole Corn, Feeding Corn Meal, Ground Oats, Cr. Oats, Oats Feed, Bran, Shorts, Poultry Feeds, Poultry Supplies. Ask your dealer for quotations. If he cannot supply you write us.

We are also buyers of Wheat, Buckwheat, Barley, Oats, Corn, Peas, Beans, etc. State quantity and send sample.

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BRAESIDE STOCK FARM

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The bull recently sold to the Fred. F. Field Holstein Co. for \$35,000, KING SEGIS PONTIAC KONIGEN, is a grandson of the great KING SEGIS. KING SEGIS PONTIAC ALCARTRA, the \$50,000 bull, is a grandson of KING SEGIS. KING LYONS, at the head of H. A. Moyer's great herd, is a grandson of KING SEGIS.

CANARY TRINTON SEGIS, our senior herd sire, is a grandson of KING SEGIS. But that is not all. He has won more Provincial First Prizes than any two year old bull in Canada. His sire's dam, BEADY THREE GENERATIONS of 30 lb. cows. His Dam, CANARY TRINTON, is by a son of the famous old cow TOM JEWELL, imported from Holland. In this bull we have CANARY, imported from Holland. Present offering: ONE BULL, both type and production. Present offering: ONE BULL, 10 mos. old, FIRST PRIZE at London in special class; Dam's record, 26.40 lbs. butter in 7 days, 106 in 30 days. We are booking orders for bull calves from high-testing dams.

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Canary Trinton Segis,

A young sire of excellent breed and good type. He has several firsts as a two year old in the Province.

Difference Between "Breeder" and "Dealer"

WHEN a man can be said to be a "breeder" of dairy cattle and when a "dealer" is a person connected with the producing end of the dairy business knowing in buying a cow he would much prefer to deal with the man who is recognized as a breeder instead of a middleman. Somehow we all feel more confidence in the fellow who is actually engaged in breeding live stock. The dealer may be equally as honest and upright in his dealings, but—well, we simply prefer to buy something from the fellow who is known to be a deal with a "breeder" instead of

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"dealer?" What quality does the breeder possess that is not possessed by the man who makes his profit easily by selling animals that he does not raise? We think we have an answer to these questions that may be illustrated by the following story of "Dan," the fire-engine horse:

"Dan" was one of three beautiful bays that drew a ponderous, shrieking fire engine through Detroit's downtown district. Whenever the rope barrier at the front of his stall was dropped, he plunged, without a word of command, to his place beneath the swinging harness. Then out and away across rough brick or slippery asphalt, guided by a brawny, coal-less and hatless giant strapped to his seat, "Dan" and his mates strained forward through the city streets to their goal. Daylight or dark, fair weather or foul, missing street cars and vehicles by a hair, urged by no other goad than the steady heave of rein on bit and an occasional word, half-praise, half-reprimand—"Dan" and his mates responded to the instinct of self-preservation that had been bred into them through generations. Some-how "Dan" knew that it was his duty to pull his share of that load to its destination in the shortest possible space of time. Regardless of what might happen, he must do his duty. He must never be a "quitter"; he must always be "game" to the last.

And then one day "Dan" did show his "gameness" to the last. A film of ice and sleet covered the treacherous asphalt. Razor-sharp calks failed to give a sure hold. There was a turn to the left and "Dan" was crowded for just a fraction of a second out of that perfect stride and balance that had always been his. He stumbled and fell forward, then rose and stumbled again. He slid and then as he was almost on his feet again, one sharp calk caught fast in the "frog" of a car track. There was a dull crack and a sithering sound as of sand paper on wood. "Dan" was down and being shoved along the pavement by the sheer momentum of that great weight of steel and gleaming brass behind him.

When the stop came "Dan" did not try to move. He saw his blue-shirted driver struggling out of the seat to which he was bound. He saw friendly hands everywhere that would soon release him from his awkward position and the humiliation of having fallen while "on the run." But, strangely enough, they would not let him rise. A fat policeman sat gently on his head as the harness was stripped from him. The big driver picked one of his forelegs up tenderly and then let it drop with something that sounded strangely like a sob. Then he turned his back on "Dan" and clambered into his seat again. The siren sounded and the engine went slowly forward again with but two horses, leaving "Dan" struggling to join them against the valiant efforts of a half-dozen policemen.

A Difference in Interests.

Two men in the crowd of spectators saw "Dan's" downfall. One was a little man with a kindly face, large red hands and an ill-fitting, ready-made suit. He was plainly from the country. The other was a big man, well-dressed and prosperous looking. He wore a large diamond in his shirt-front and had a distinctly "horsey" appearance. Both seemed unusually interested in "Dan," with his foreleg lying limp and askew on the pavement. Then the little man approached the policemen and seemed to ask them a question. They shook their heads, but the little man was earnestly insistent. Finally they agreed to his request and the little man stooped and picked up the prostrate animal. His hands went surely to two small wrinkles on the broad chest. Quickly

(Concluded on page 37.)

At Service

Yearling Son of the Great May Echo Sylvia

The greatest combination of milk and butter in the world.

DAM:—MAY ECHO-SYLVIA.

CHAMPION ECHO SYLVIA
PONTIAC.
A "champion" by breeding, records, individuality.

SIRE:—SPRING FARM PONTIAC
CORNUCOPIA.

Champion's three nearest dams average records for 7 days for both milk and butter are the highest in the world, being 759.5 and 38.38 lbs, respectively.

He is a magnificent individual, and a few weeks ago was pronounced by a leading American Holstein limited number of approved cows—terms a matter of arrangement.

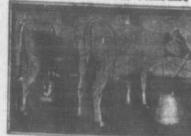
We have for sale, a small number of well bred young females in calf to Champion, and to our fine gone to the U. S. in the last couple of months.

H. Lynn, Herd Supl.

Avondale Farm

Brockville, Ont.

HINMAN
THE UNIVERSAL MILKER



MADE IN CANADA

because they save where the only saving is possible in the dairy. You can't save on feed without losing milk yield, but YOU CAN SAVE ON HAND LABOR. A 3 unit HINMAN MILKER costs less than board and pay for one hired man for six months. Illustrated Booklet "D" FREE.

H. F. Bailey & Son

Galt, Ont.

Sole Manufacturers for Canada.
Under HINMAN Patents.

Over 140,000,000 Cows

milked

The Last 3 Years With

HINMAN MILKERS

YOU cannot afford to accept a milker that has done less.

Will Pay for Themselves Before Spring

Buy the Strongest Halter Made Have the best and save!

(\$1.25. Worth of Pl. William.)
Once let a young colt pull out of a halter and he learns a bad habit. Nothing will hold him so surely as a Giant Halter. The halter a horse pulls on this Giant Halter the tighter it holds. He can't break it.

GIFFITH'S
Giant Halters

Go to your dealer and see the Giant Halter and you can see the strength in it—well attached double harness leather or russet bolting—and it inch holds—and you can see why it wears so well. The next best halter you will see will cost you \$2.00. You can buy two Giant Halters for that money. OTHER GIFFITH MONEY SAVERS Our big factory makes only harness specialties—all money savers. Ask your dealer for a list. Or write to us and we will send it FREE by first mail.

G. L. GIFFITH & SON
76 Waterloo St., Sturford

HOLSTEINS—60—HEAD

Oxford Breeders Sixth Consignment Sale

Our First Fall Sale
Woodstock
Dec. 13, 1916



55 Fresh Milkers and Springers
5 Choice Bulls

THE Oxford District Holstein Breeders' Club will hold their first fall sale at WOODSTOCK, DEC. 13th, 1916. With milk and butter record breaking prices surely this is a rare opportunity offered to the two years old, and nearly all are in R. G. M., or from R. O. M. dams. The well-known reputation of this sale company is a guarantee to the cattle.

The feature of the sale is the unusual number of fresh milkers and springers, and easy terms. No by bidding, no protection, all at your own price. Write the Secretary for a Catalogue with full details of this sale.

MOORE & DEAN
Auctioneers

Sale will begin at 12.30 sharp.

W. E. THOMSON
Woodstock, Sec.

FARM AND DAIRY

Dairy Standards Act Warmly Discussed at Dairymen's Conventions

Some Meetings Strongly Favor New Regulations—Others Oppose Them

OLEOMARGARINE and the Dairy Standards Act furnished warm subjects for discussion at the local convention of the E.O.D.A., held in Northumberland, Hastings and Prince Edward counties. On the subject of margarine remarkable unanimity of opinion prevailed. The two to a man, are behind the movement to offset the raising of the restrictions on this butter substitute. At all the meetings strong resolutions were passed calling upon the Government to reject the proposals which are being made by the cold storage and packing interests for the removal of the restrictions on the margarine trade.

On the Dairy Standards Act, however, the dairymen were not so united. Many strongly favor the new legislation, but strong and active opposition to it is also being manifested. At Rehoboth, Peterboro and Warkworth, resolutions were passed, approving of the Act. At Striling stronger opposition was encountered, and it was agreed, pending the results of a referendum that is being taken amongst the factory patrons of Hastings county, not to put a resolution which had been proposed in favor of the Act. At Frankford and Picton the opposition carried the meetings, and resolutions condemning the Act were passed by substantial majorities. It is opposition was not unexpected, as it was known that these dairy districts were opposed to the legislation providing for the payment of milk by test.

Regulations—Others Oppose Them

nominated as the district representative on the board of the Association. Alex. Hume moved, seconded by Geo. Carlew, "that whereas certain wholesale produce houses in Canada were making efforts through the Dominion Government to have margarine brought into Canada duty free, and whereas some statements had been made that the would lead to the belief that the representations of these men would be accepted to, be it resolved that the dairymen of the county put themselves

(Continued on page 42.)

Meeting the Objections to the Dairy Standards Act

(Continued from page 4.)

Unfortunately certain things were advanced against this. First, the authorities fell out as to the relative merits of the different tests and in the controversies which followed, people became confused and their confidence in the test was shaken. Secondly, the price of cheese was low and the difference between the amounts received by the pooling system and that of the test systems was not so great as it is now and therefore the introduction of payment by test, was not so important a matter. Besides, we were not then so well informed as we are now, regarding the pooling system, that is worked by the factory patrons introduced payment by test voluntarily.

Q.—Why haven't factories accepted payment by test voluntarily?

A.—There are several reasons. Chief of these is that patrons have not been made fully aware of the injustice of naturally, they hesitate to abandon a system that has become well est-

ablished, irrespective of the merits of such a system. There was also the danger that a factory would lose patrons who were dissatisfied with the tests they received and who had the opportunity of sending their milk to another factory. This objection has been overcome, because payment on a quality basis will be uniform all over the province.

Q.—Why have some factories dropped the system?

A.—Chiefly for the same reasons that other factories have not adopted it. Local conditions, such as do not exist in all factories, have had much to do with this. We should also remember that a great many factories have persistently refused to abandon the system of payment according to test.

Q.—We have a cooperative factory and each man pays according to the amount of milk he supplies, irrespective of the distance his milk has to be drawn. Is it fair to ask a man with low testing milk, to pay as much as a standard for drawing it as the man with high testing milk, when he receives less money per hundred pounds from his factory?

A.—He can remove the unfairness by producing better milk. This should be an added incentive for patrons to increase the butter fat content of their milk and is therefore a strong argument in favor of the pooling system.

Q.—Can a maker get a fair sample of milk in hot, dry weather, when the cream tends to be leathery?

A.—The better the quality of the cream on milk will tend to lower the test and this should result in patrons testing their milk better care. Taking the samples will also lead the maker to make a closer inspection of the inferior stuff, which is now doing incalculable injury to the output of many factories, will be rejected.

Milk that is properly cooled and cared for does not reach the factory with a leathery cream on it.

Q.—What is to prevent a patron from running a separator; keeping the skim milk; adding the cream he got through a separator; to the milk that goes to the factory as if he had sent all of the milk?

A.—If he did this and escaped detection, he would have part of the milk that goes to his factory. It is a skim milk that is his trouble. Then question if it would pay him. He would probably read abnormal milk would probably read abnormally high in butter fat and he would not escape detection. The law regarding tampering with milk is not interfered with by the Dairy Standards Act.

Q.—How can the Act be enforced?

A.—It can be enforced as well as any other law. If a factory did not adopt the regulations and there was a disagreement with a patron over his milk check, he could not collect under the law. Factories are not given the privilege of paying on a pooling basis. The law will be complied with voluntarily, for Ontario farmers are law-abiding people.

Q.—Why is there so much opposition to the act if it is a fair one?

A.—The opposition is not greater than one would expect in introducing any reform. There is opposition to all such measures at first. When the law requiring the inspection of cheese factories was first introduced, all kinds of opposition was raised to it. Now no one would think of objecting to that law. The fact is, we started in wrong. The pooling system became firmly implanted before we knew what an unjust system it was. Men do not like a change and some of them will raise opposition. Once payment by test becomes established, it will be accepted without question as the proper thing.

THE TWO GREATEST BULLS IN THE WORLD

Inka Sylvia Beets Posch

Rag Apple Korndyke 8th

Worthy Sons of Worthy Sires

Rag Apple Rhoda, Born April 20th, 1916.

GRANDSON OF RAG APPLE KORNDYKE 8TH DAM—GIPSEY QUEEN RHODA, BUTTER 3071.

HIS SIRE is Sir Pontiac Rag Apple, who is the strongest bred milk in Canada, being sired by Rag Apple Korndyke 8th, the only bull in the world with a 30-lb. junior two-year-old daughter. His dam is Miss Johanna Pontiac Korndyke, with a 23 lbs. four-year-old record. She is sired by double son of Pontiac Korndyke.

HIS DAM—Gipsy Queen Rhoda, a cow of outstanding individuality, with a record of 30.71 lbs. butter from 548 lbs. milk in 7 days, fat 4.4 per cent. She is sired by a brother to the Manor Farm cow, Queenie L., 26.67 lbs. butter, 406 lbs. milk in 7 days, fat 5.02 per cent.

King Sylvia Keyes, Born Dec. 12th, 1915.

SON OF INKA SYLVIA BEETS POSCH. DAM—HELENA KEYES. BUTTER 28.20.

HIS SIRE—Inka Sylvia Beets Posch is only bull in Canada with 41 lbs. daughter and sire of only cow in world to produce 152 lbs. milk in one day; also has four daughters all producing over 100 lbs. milk in one day. He has four daughters that have an average of 31.07 butter in 7 days, and they average 115 lbs. milk in one day. He also is sire of a 22 lbs. senior two-year-old with 92 lbs. milk in one day, and a 21 lbs. junior two-year-old.

HIS DAM—Helena Keyes, a cow of outstanding merit, with a record of 29.20 lbs. butter, 683 lbs. milk in 7 days. Best 24 days' milk, 130 lbs. Her dam has 75 per cent. Same blood as sire of average 100 lbs. Sadie DeKol Burke. 54,800 lbs. milk in two years have over 100 per day for six months in semi-official test.

A. D. FOSTER & SONS

Write us about two of the greatest bulls in Canada. Sunnydale Farm

Bloomfield, Ont.

Renfrew Standard

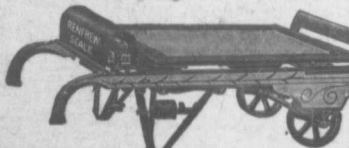
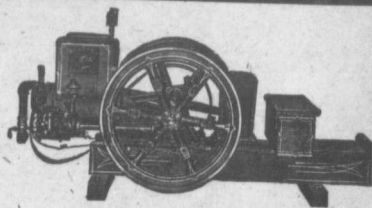
The High Quality Line For Progressive Farmers

Of all machines that a farmer buys, the cream separator, perhaps, is the one he should be most careful in selecting.

While almost any make of cream separator is better than none at all, the difference in the skimming done by different makes is almost unbelievable. And the difference to the dairyman of a separator skimming at 19 per cent. and one skimming at .61 per cent., is a matter of \$2.70 in cream profits on every 1,000 lbs. of milk skimmed, estimating butter fat to be worth 30c. a lb.

Government Dairy School Reports of skimming tests show that the Standard cream separator skims down to .61 per cent. Thus we offer you the most convincing and unbiased proofs it is possible to present on behalf of the close skimming ability of a cream separator. When any other separator is claimed to skim down to .61 per cent. ask for Government dairy school proofs. If every separator purchaser did this he would make a lot more cream profits and save himself a lot of worry.

Get our separator catalogue and learn how it is possible for the Standard to skim so close, run so easy, be so sanitary, and last so long.



Here is a gasoline engine built to stand up under hard usage and severe climatic conditions. The very strongest, sturdiest materials are used, and the engine is built oversize—a 6 h.p. Renfrew Standard, for example, is almost as large as the ordinary 8 h.p. engine. The Renfrew Standard is a real high-quality engine for use on Canadian farms. We've even gone to the trouble of equipping it with two separate ignition systems and putting on a steam engine type governor, and a specially designed carburetor to save gasoline.

We've a booklet that tells all about it. Will you let us mail one to you?

This handy scale will pay for itself quickly on almost any farm. Weighs anything from a pound to a ton. Weighs on even or uneven ground. Stands up in a corner out of the way when not in use. Ask for the Renfrew Truck Scale and learn everything about it.

Christmas Greetings

are herewith extended, to all readers of this publication. We trust that you will enjoy your Christmas in so far as it is possible in these times of war and anxiety for the safety of our soldier boys.

The Renfrew Machinery Co. Limited, Renfrew, Ont.

Agencies almost everywhere in Canada

STEVENS' POTASH FERTILIZER

Destroys wire worms, Click-beetles, white grubs, cut worms, army worms, Grassy moths, brown-tailed moths. Address

GEORGE STEVENS
Peterborough, Ontario, Canada

GetFrost & Wood Catalogue

Handsome New Catalogue just off the press. Full description of splendid, complete line of Frost & Wood and Cockshutt farm implements. Write for a copy to-day.

THE FROST & WOOD CO., Limited
Smith's Falls, Ont. (Montreal, St. John)

MEET US AT GUELPH WINTER FAIR

We will have on exhibition, samples of our Roofings, Sidings and Ceilings—also sample Garage and a

Model Steel Truss Barn

The Metal Shingle & Siding Co., Ltd.
PRESTON, ONTARIO

(See also advt. on page 47.)

The Rennet Situation

THE rennet situation has not improved, according to the statement of Mr. Publow at the Stirling convention. Quotations on rennet extract are now about \$16 a gallon, and at present there is no prospect of the price being lowered. Aopsis and rennet mixture was being quoted at \$7 a gallon, and though it was giving satisfaction as far as it had been tried, the keeping qualities of cheese made from it had not been proved. A big advance was also reported in cheese cloth, the price being eight cents a yard. Coloring was also on the up grade, the prices ranging around three dollars, with possibilities for still further large increases before the end of next season.

The Law Regarding Margarine

SO much is now being said about the importation of margarine to be used as a substitute for butter, and of the making of filled cheese, in which, though ostensibly to lower the cost of living to the consumer, the vested interests are in reality looking through a temporary situation created by the law respecting the sale of food and other commodities, may be of interest. Regarding oleomargarine, chapter 7, 1914, of the Dairy Industry Act has this to say:

"The manufacture and importation of oleomargarine or other like substitutes for butter is entirely prohibited, nor must any person incorporate any ingredients in butter not provided by the Act and Regulations based thereon. Butter must not contain over 16 per cent. of water. The full net

weights are provided for, one-quarter pound, one-half pound, one pound and two pounds when moulded or cut.

"A fine of from \$10 to \$50 is provided, and in default thereof, imprisonment for a term not exceeding six months."

In order to provide against the making of filled cheese, by which, of course, is meant cheese made from skim milk in which the butter fat is substituted by other and cheaper fat, or of making cheese from skim milk alone, the same chapter of the Act states as follows: "That no cheese shall be made from skim milk, and no adulteration shall take place during the process of making." The Act provides for a fine of from \$200 to \$400 on summary conviction, and in default of payment, imprisonment for a term not exceeding six months.

Difference Between Breeder and Dealer

(Continued from page 35.)

slightly deeper mark had left a small bunch. Then he straightened up and said vaguely to the policeman: "Yes, it's Dan," I bred him and his dam and his sire. Good horse; too bad."

And what of the other man with the diamond and the "horsey" appearance? He was saying to himself: "I know where there is another that will be a perfect match in color and style. Wonder if I can get my price for him?"

The little old man was the breeder, with the breeder's true love for the animal of his creation. The big man was the dealer, with the dealer's only purpose in trading in the flesh of purebred animals—that of pecuniary gain.—Michigan Dairy Farmer.

21 Cents

We are paying the above price for crate fatted chickens, bled, and picked clean to the wing tips. Must be plump, straight breasted and good color.

WALLER'S

713 Spadina Ave., Toronto, Ont.

I earn \$2 a day at home

You may say that, too—if you want more income. Easy to learn. Steady work at home the year round. Write Auto-Kutter-Holroyd (Canada) Co., Ltd. Dept. 901 F 25 College St., Toronto.

Deafness



Partial hearing is now being restored in every condition of deafness or dulness of hearing from causes such as Catarrh of the Eustachian Tube, Inflammation of the Eustachian Tube, Middle Ear, Chronic Catarrh of the Middle Ear, Acute Catarrh of the Middle Ear, etc.

Wilson's Compound Ear Drops
"Little Wilson's Compound Ear Drops" receive no praise for being a cure for deafness, but for being a cure for the only job the ears will do for you—the hearing of the voice of the loved ones. Wilson's Compound Ear Drops, giving you full participation and enjoyment in life. Write for full particulars and testimonials. WILSON'S EAR DROPS CO., 1000 Broadway, N.Y. 10003

FARM AND DAIRY

A Day With Canada's Biggest 20,000lb. Herd
Hillside Farm, Chesterville, Ont., Excels in Cows of this Class—The Herd Has Been Built Up in Six Years

"THE man with an ideal is about of the ability to manufacture the only man who gets any most from food consumed. She is now where in this world," were the under test and is bred to qualify. Her record for six months is over 14,000 words of a man who had come to the record for six months is over 14,000 lbs. of milk. It will be something extraordinary that prevents her from decline of life and had come to the 20,000 limit when her year full. The story of Hillside Farm is one passing the 20,000 limit when her year full. The story of Hillside Farm is one proof of this statement. Mr. W. A. McElroy has an ideal, and in six years is up. Rosebud Maid was purchased when breeding has gone far towards four years old and has demonstrated achieving it. A herd of cows, main- her worthiness to remain at Hillside tained and fed on his 100-acre farm, by giving 2,130 lbs. of milk and 905 that were producers of high charac- ter in the short-time test, and that ter in the short-time test, and that had ability to stand in the front ranks seven day record of 685.7 lbs. of milk



Rosebud Maid.

in long-term work as well, was the and 23.7 lbs. butter. The feel of her mark set for himself by Mr. McElroy skin is an indication of her ability when he started in the pure-bred busi- ness. This meant the getting to and when her udder and veining are gathered cows that were big in constitu- tion, capacity, energy and who were equipped for business. It meant mat- ing them with a sire who could trans- mit like qualities and it also meant the ability to handle these animals in a way that they could give their best. The first animal purchased was Rosa Bonerges. She is one of those low set, heavy cows, possessing an constitu- tion of big capacity and a digestive system that could turn all the feed given to good account. Her records at Hillside have demonstrated her worth. In four years she has never been dry. So persistent has she been that the day before freshening it was necessary to milk her. On the 10th of June, 1914, she started out on a yearly record in which she achieved the credit- able record of 21,996 lbs. milk and 987 lbs. butter. This production was good enough to bring the authorities of Manitoba Agricultural College to Hillside for a daughter of hers for the college herd. Francy Bonerges 3rd is a companion cow of Rosa's and one of equal merit. She has great length, straight lines and an udder and veining that speak for a reputation for doing things. Lily DeKok Lucknow is near the top. She was purchased when five years old, and in 1914 carried a calf for nine months and gave her owner 2,150 lbs. of milk and 1,051.25 lbs. of butter. In two of her daughters are being held in the herd. Her early life was not so pleasant as it has been during the last few years. In consequence, she was not very well grown and splendid capacity for constitution and alertness carried her through. She shows great energy, has a clean point- ed, wether, sharp opening chin, a long neck and beautiful head. Her test for butter fat makes her an independent of Government restric- tions as it is 3.78 per cent. Another one of the good ones is Huelkeberrie Invader, who with three tests made 20,332 lbs. milk and 850 lbs. (Continued on page 41.)

Riverside Holsteins

We offer for sale Holstein bulls, 4 to 8 months old, sired by KING JOHANNA PONTIAC KORNDYKE—18 R. O. M. and A. R. O. daughters, averaging over 4 per cent. butter fat— or from his tested daughters. Also a few unrelated females.

J. W. RICHARDSON, Caledonia, Ont.

VILLA VIEW HOLSTEIN

Over 60 pure bred holsteins and only one bull ready for service. His dam is a 20-lb. granddaughter of Hengerveld DeKok. His dam and sire's dam average 22.50 lbs. of butter for seven days. We can also spare a few heifers just bred to King Segis Alcarita Calamity.

ARBOGAST BROS.

Sabringville, Ont.

CLEAR SPRING FARM HOLSTEINS FOR SALE

Young bulls of Pontiac Korndyke blood. We have 4 of these, 9 months old, sired by our present herd head "Korndyke Burke Hot Loo," pronounced by expert judges to be a bull of outstanding type and quality. His sire, Pontiac Korndyke Hot Loo, by Pontiac Korndyke, Dam—Boon Homestead Burke with 7 day record of 21.51 lbs. and testing over 4 per cent. fat. Dams of bulls have good R.O.P. backing. Could also spare a few yearling heifers and mature cows bred to our herd bull. Come and see them, or write to J. C. JAKES, Merrickville, Ont. (1 mile from C.P.R. station.)

BUY NOW

Get your best herd sire at Elmispie. We are offering a half-brother of MAY ECHO SYLVIA from a 21-lb. Junior four-year-old. His three near- est dams and two of his sisters average 23.83 lbs. butter in seven days. Send for description and extended pedigree. Priced low for quick sale.

J. H. EUFF & SON

R.R. 1, Bloomfield, Ont.

40 POUND BLOOD

Bull born Feb. 1914, two-thirds black, very straight, long and deep bodied, and short legged, smooth and full of quality. His sire, MAY ECHO CHAMPION, is a full brother to MAY ECHO SYLVIA. Records of dam, granddam, and her full sister, sire's dam, granddam, and his two full sisters average over 20 pounds butter in 7 days. Price \$100.00 on our at Toronto.

R. F. HICKS

NEWTONBROOK

Fairmont Holsteins

Young bulls for sale, all sons of the great King Segis Alcarita Calamity, whose ten nearest dams average over 30 lbs. butter and nearly 4.80 per cent. fat. All from good record dams; one from a 22,000-lb. granddaughter of Collis Johnson Ltd., at prices that will sell them. Also cows and heifers bred to King.

PETER S. ARBOGAST
R.R. No. 2, Mitchell, Ont.

Holstein Cows Excel All Others

Proof is found in 100,000 Official Tests For Profitable Yield of Milk Butter and Cheese. No Other Breed Can Equal Them For Their Production of High Class Veal, When Age or Accident Ends Their Usefulness. Holsteins Make a Large Amount of Good Beef.

W. A. CLEMENS, Sec'y., H. F. ASH., St. George, Ont.

LAKESIDE AYRSHIRES

A select lot of young bulls, all ages, bred by Auchenbrain See Farm (Imp.) 85768 (5885), Grand Champion at both Quebec and Sherbrooke, from Record of Performance Dams. Write for catalogue.

Proprietor: GEO. H. MONTGOMERY, Dominion Express Bldg., Montreal.

Manager: D. McARTHUR, Phillipsburg, Que.

RIVERSIDE AYRSHIRES

calves male and female; bulls fit for service; by Price stock Netherington Lochnivar, Imp. 3931. Females all ages, from 1st Nibs 286, and good producers. One Standard Bred Stallion 16 months, by 1st Nibs 286, "55909".

Apply to Robert Stinton, Manager Riverside Farm, Monte Ballo, Que. Or to Hon. W. Owens, Westmont, Que.



Rosy Bonerges.



ZENOLEUM

THE GREAT COAL TAR DISINFECTANT (Made in Canada)

Disinfectant, Animal Dip, Lice Killer. Will not poison. Will not hurt you. Will not explode or burn. Kills vermin and lice. Cures skin troubles and mange. Disinfects incubators, stables and poultry houses. A remedy for diseases of poultry and all live stock, and the most effective dip on the market. Has been found by experiment to have a greater disinfecting and germ-killing efficiency than competing coal tar disinfectants, and several times the efficiency of pure Carbolic Acid. Carbolic Acid costs \$16 per gallon and Zenoleum costs \$1.50. Which will you have? Carbolic Acid burns and poisons whatever it touches and is dangerous. Zenoleum is more effective in disinfecting and is absolutely harmless. You prefer Zenoleum, don't you. Ask your dealer for it.



MADE IN CANADA

ZENOLEUM

For Sheep

For ticks, flies and maggots, scab, rot or white lice, castration, stomach worms, sore mouth, lung worms, fouts, etc.



ZENOLEUM

For Horses

For distemper or strangles, glanders and farcy, cuts, bruises, ringworms, thrush, mange, worms, lice, etc. Unhealthy horses won't stand hard work, and in some cases are not able to work at all. Zenoleum will keep them working every day in the very best of condition, and free from disease. Keep Zenoleum handy. You never know when you will need it.



ZENOLEUM FOR SWINE

A thorough disinfectant for pens, yards and troughs, capable of destroying germs of contagious diseases, tail, canker of the nose, mouth disease, rickets, scabs, worms, cuts, bruises and garget. Also is a valuable antiseptic in castration. If your pigs are to do housed in healthy buildings, bring them up the "Zenoleum" way. It pays in weight and condition at market time.

Farmers' Medicine Chest

Practical information by recognized authorities on the prevention and curing of diseases in horses, hogs, poultry, sheep and cattle. To know how and what to do will perhaps some day save you a valuable animal. Be prepared. Get it to-day. It is free for the asking. Every Farmer who owns Cattle should keep Zenoleum.

ZENOLEUM

For Poultry

For frostbite, pip, chicken cholera, foot diseases, canker in chickens, tuberculous, scaly leg, gapes, and blackhead. Poultry when well taken care of return a greater interest on the money invested than any other live stock on the farm. You will be money in pocket by ensuring the health of your flock and the cleanliness of its surroundings by using Zenoleum. Supplied in liquid or powder solution. Leading poultrymen everywhere use Zenoleum for disinfecting roosts, nests, houses, and incubators.



ZENOLEUM

For Cattle

For cattle, lice, horn flies, ringworm, eczema, scurf, mange, scours, screw worms, sore mouth, warbles, foot rot, abortion, black leg, blood, cattle ticks, cow fever. First class milk, cream or butter can only be produced by healthy cows, stabled in sanitary buildings. The best way—the Health Insuring way—Zenoleum.



If Zenoleum is not all we say it is—or even what you think it ought to be, you can have your money back. No arguing—just money. PRICES: 25c., 50c., 90c., and \$1.50 at dealers, or by parcel post, post paid, if ordered direct.

THE ZENNER DISINFECTANT CO., 318 Sandwich St. East, WINDSOR, ONT.

Possibilities for Improvement in R. O. P. Test

The Danger of the Race for Records—A Consideration of the 300 Day Test—
J. L. Stansell, Elgin Co., Ont.

It is always a delicate matter to suggest improvements in a system already recognized as a good one. Undoubtedly the R. O. P. test has accomplished a great deal for the dairy interests of Canada and definite dairy farmers something gueswork largely prevailed. Perhaps, of all the efforts on the part of the Department of Agriculture in aid of the live stock industry, the supervision of the milk records has proved one of the most popular as well as beneficial in its results.

For a number of years official tests have been conducted for short terms and these have served a valuable purpose but perhaps, an even greater value may rightly be placed on a test covering a full lactation period. It is well known that some cows, especially in high condition, may make very high records of milk and fat for a short time, but to keep up the profitable product throughout the season, and usually the cow that stays on the job is the one that returns the most profit to her owner.

The valuable knowledge of the producing ability of our cows may be, it is not without its dangers, as there is a possibility of the test becoming a blind race for records. More spectacular than real, I feel convinced that the safe and sane manner of making records is in view the production of milk and fat at a good margin of profit over the cost of food consumed. High pre-test tests where daily and fed to the very limit of capacity may prove dangerous for the average breeder. Then also we must consider the welfare of the unborn progeny, for under the R. O. P. rules a cow must, for a period of the test, accomplish the double duty of production and her production, she is generally recognized that a brood mare should have regular exercise or light work, but a mare should be worked up to the limit of her ability while carrying her foal. If we, as breeders, are to make real progress in our work we must strive to see that it will develop and even excel that performance of the dam, and that same time each cow must commence long before the birth of the calf. Under no circumstances should a cow be milked less than two months of calving, or than the trouble experienced with weak and delicate calves is due to lack of tests, it would be a distinct

The 300-day Test. The R. O. P. test was designed to encourage regular breeding as well as in order to qualify a cow must be fresh again within fifteen months after the beginning of the test. Otherwise, although a statement is given of her production, she has no standing as an R. O. P. animal. Right here I think, a place for improvement. After some years' experience in testing I would unhesitatingly say that the best time for a period of milking should be for more than 300 days and the breeding limit shortened to, as 400 days. This would conform more nearly to the practical conditions on the average dairy farm and would be a better indication of the commercial value of the cow. It would also admit of the freshening at the same time each season, according to the market for animals intended for the winter Fair dairy.

Another danger has arisen in connection with records which is worth like to point out, and that is where formerly selected mainly on the strength of show ring records; the pendulum has now swung to the opposite extreme and some breeders are making the equally grave mistake of selecting their breeding stock entirely on the records of production; apparently regardless of defects and undesirable characteristics that may be present. This latter method has been made. This latter method can only lead to disappointment so clearly in the evidence of herds of to-day. Obviously, however, this mistake is being made but in improper application of records but in improper application of the knowledge gained therefrom. The way is to secure a good type of breed to which the constitution and coupled with a robust character, after which records should be looked for. The more the value of the animal, especially in the case of a sire, is kept and over a dairy herd recently remarked was made by a breeder, well qualified to judge, that the sire at the head was one of the best from the standpoint of records, but as an individual was simply a first class bull.

After some years' experience in testing I would unhesitatingly say that the best time for a period of milking should be for more than 300 days and the breeding limit shortened to, as 400 days. This would conform more nearly to the practical conditions on the average dairy farm and would be a better indication of the commercial value of the cow. It would also admit of the freshening at the same time each season, according to the market for animals intended for the winter Fair dairy.

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1206 (40)

Arrange to Attend The Seventh Annual TORONTO FAT STOCK SHOW

Union Stock Yards, Toronto
Large Entry in all Classes
Judging 10 a. m. Friday, Dec. 8th, 1916
Auction Sale Prize Winners
10 a. m. Saturday, Dec. 9th, 1916
Reduced Rates on all Railroads

A BARGAIN
In Pure Bred Holstein Bull Calves
Write me and I will surprise you.
Stock bought of E. H. Dollar and
Stevens Bros. Co., of New York.
Price around \$50.00.
Chas. E. Mudge, Proton Sta., Ont

FOR SALE
1 extra good Clyde Team, weight
3,500 lbs., 6 and 7 years old. 1
very choice registered Clyde Steer,
2 1/2 years old, weight 1,350
lbs., 2 1/2 years old, weight 1,350
lbs., 2 pure-bred Durham Cows, in
lute, 2 pure-bred Farn's \$2,500
calf to Willowdale Farm's 42,000
bull.
F. M. PASSOW - Easton, Que.

Peck, Kerr & McElderry
Barristers, Solicitors, etc.
415 Water St., Peterborough
E. A. Peck F. D. Kerr V. J. McElderry

Lyndenwood Holsteins
Bull calves from 6 to 11 mos. old
from official testing also
chose young cows and heifers
with large official records or from
record dams. Prices reasonable.
W. J. BAILEY J. JARVIS, ONT.

WELL DRILLING WELL
Own a machine of your own. Cash
or easy terms. Many styles and
sizes for all purposes.
Write for Circular.
WILLIAMS BROS., 444 W. State St., Ithaca, N.Y.

Fernbrook Ayrshires for Sale
Bulls from 8 to 12 months old,
out of dams closely related to the
two greatest Ayrshire cows in the
world, Garretshill May Mischief
and Jean Armoist.
COLLIER BROS., Beachville, Ont.
Oxford Co.

Lakeview Offers A Family of Canadian Champions

We are now offering for sale the highest producing 3 year old in Canada, the 34 1/2 lb. Canadian Champion, due in Freshen March 22nd, 1917, and her two daughters, her own dam, her full sister and her daughter. Also several young bulls, all sired by Dutchland and half brothers to the 34 1/2 lb. cow above, one is out of Queen Inka Dekko, the 24 1/2 lb. year cow, who held the Canadian Championship for 4 years for butter in the 7 day day. 3 months after calving. Want every breeder who is in the market to buy a foundation family of Champion blood. The opportunity of seeing our herd and these offerings of Champion blood.
MAJOR E. F. OSLER
Proprietor.
Lakeview Farm
BRONTE, ONT.
T. A. DAWSON
Manager.

THE THINGS THAT COUNT



Neatherton King Theodore

NETHERTON KING THEODORE
(Imp.) our Sr. Herd sire is a bull of outstanding merit. He was Sr. Champion at London in 1916, and sired a Bull Calf, seven months old for sale from her and sired his months old from SCOTCH THISTLE, the Canadian Champion 3-year-old, and sired by NETHERTON KING THEODORE. Also offered for sale.



Springbank Myrtle

**A. S. Turner & Son
RYCKMAN'S CORNERS**

ventage, freshen in order out these when conform and con year. It is in the moos milk and vances t until, hardly. This yearly the best there is country, through with pres of live stit not be an ing of con months, Some O Such a would be performance however, founded of main ones. I. Re cent months ably with is a real obstacle. fruit to could be standard opinion th visuals ex int stande intelligent so desires (test unles is very tr records, a longer in a cords in d be to str regardles 4. "We co countries, States, wh conducted This is a fortunately Canadian h handicappes O. P. rules Association official test restrictions, allow Canada field with

vantage, as they are required to freshen at certain seasons each year in order to be at their best. At present these do not appear to advantage when compared with cows of poorer conformation which remain at home and continue in the test for a full year.

It is well known that a cow returns the most clear profit when in full milk and as the lactation period advances the profits gradually dwindle until the last few weeks she may hardly pay for the cost of her feed. This would indicate the need of a yearly freshening if we are to get the best returns from the herd. There is also a great loss to the country, as well as to the breeder, through long delayed breeding, and with present high prices and scarcity of live stock the R. O. P. test should not be made to encourage the breeding of cows every fourteen or fifteen months, as it now does.

Some Objections That Are Raised.

Such a test as I have outlined would be the ideal Record of Performance Test. We must admit, however, that there are some well founded objections to the change, the main ones being as follows:

1. "Records made for a period of ten months would not appear favorably with those already made." This is a real though not a very serious obstacle. 2. "It would be more difficult to qualify our cows." This could be overcome by lowering the standard slightly, though I am of the opinion that most of the good individuals could easily reach the present standard in ten months if given intelligent care. 3. "Any one who so desires can conduct a ten months' test under the present rules." This is very true and many are doing so, but scant recognition is given such records, as compared with those of longer terms and where prizes are given in some cases for the best record in each year the tendency will be to strive for the longer record regardless of other considerations. 4. "We could not compete with other countries, especially the United States, where semi-official tests are conducted for a 3 year."

This is a very important point, but fortunately suggests its own remedy. Canadian breeders have always been handicapped in this respect by the R. O. P. rules and it is up to the Breed Associations to authorize a semi-official test for a full year without any restrictions whatever. This would allow Canadian breeders to enter the field with equal chances and show

Compliments of the Season to All Farm and Dairy Readers



Lakeview Dutchland Hengerveld 2nd, three years, weight 2,300 lbs.

Lakeview Dutchland Hengerveld 2nd.

No. 16259

heads our herd. He was Grand Champion at Canadian National Exhibition and Western Fair, 1916. Junior Champion, C.N.E., 1915. He was never defeated in the ring. His three-quarter sister holds the Canadian senior three-year championship with 345 lbs. butter 7 days. Why not purchase a son of his to head your herd?

Write to-day for prices and extended pedigrees of the choicest in Holstein heifers and bulls. He is backed by those wonderful bulls, Colantha Johanna Lad and Pieterje Henk, Count DeKof. Correspondence solicited.

W. G. BAILEY - Oak Park Stock Farm
R. R. No. 4, Paris, Ont., Can.

what many of us believe, that Canadian-bred cows are as capable of extreme production as those of any other country.

Such a test should be distinct from the R. O. P., but might be supervised by the same inspectors. A test of this kind should only be attempted by a very skillful herdsmen and even then I doubt if it is a beneficial experience for the cow, but it has a great advertising value to the breed.

A Day With Canada Biggest 20,000 Lb. Herd

(continued from page 33.)

Butter in one year. Like her stable mates, she is built of stuff that counts. Her long, deep body, straight lines, good udder and veining, led Mr. McElroy to invest in her, believing that

she would make good. He has not been disappointed.

Sadie Teake's DeKof.

Sadie Teake's DeKof, whose dam was imported, and who had a record of 104 lbs. of milk in a day, leads the bunch. She is a sweet cow, possessing a straight top line from which extends ribs of great spread, giving her a big, roomy pith and a huge barrel. Her udder is of the most approved type, and well balanced. The milk veins are large-branched, ending in big orifices. As one would expect, she has great length of quarter and marked nervous force. Her yearly record is 22,944 lbs. milk and 944 lbs. butter. Mr. McElroy is keeping three of her daughters, one of them, Sadie Teake's DeKof 2nd, having a two-year-old record of 1751 lbs. butter in seven days, showing that like begets like.

Space will not permit our going into detail in connection with all the good in

cows at Hillside, but mention must be made of two others. Edna Duchesne Hengerveld is a daughter of Sir Veerman Hengerveld, an American bred bull, who has 65 A.H.O. daughters. She has three 30-lb. full sisters and seven 30-lb. half-sisters. This is one of the herd yet to be tested.

The gem that is the pride of Mr. McElroy's heart is Queen Hortense of Hillside, a very large two-year-old bull that is growing very fast and is also under test. She promises something good for the future. For 123 days in her present form, she averaged 64 lbs. per day. This gives her a lead of most animals of her age and breeders will need to watch her future progress.

The good records of the animals at Hillside is surely enough evidence of their worth, but if any are not convinced they are open for inspection and will demonstrate their abilities in a manner pleasing to skeptics.

Get a Sire WITH 20,000 lbs. and 35 lb. Backing To Head Your Herd



BARONNESS MADOLINE #16259
3 YR OLD CANADIAN CHAMPION
R.O.P. MILK 24,314 LBS. BUTTER 1,925 LBS.

I offer at present six young bulls, two sons, a grandson and full brother of Baroness Madoline, the greatest R.O.P. cow in Canada, and a seven-day record of 29.13 lbs. at 4 yrs. Two others from high record dams. Three of these bulls are sired by King Segis Alacra Calamity, the 35 lb. show bull.

Write for prices and pedigrees, or better, come and make your selection at once, as they are priced to move quickly.

WILLIAM STOCK R.R. No 1 Tavistock, Ont.

Last Opportunity to Compete

For the Overland Touring Car and Other Great Prizes.

Farm and Dairy readers who intend entering Everywoman's World's interesting competition should study the puzzle appearing on this page and forward their answers at once.

This is the last announcement of this great event that will appear in Farm and Dairy.

Guarding Against Disease

C. S. Putnam, M.D., N.D.A.C.

THE greatest preventive force against any disease is that normal, healthy condition of the person exposed to the infection of that disease. A person's power of degree of resistance to the body's safeguard.

To keep that resistance at its best one must live normally—no excess in working, playing, eating or drinking, sleep eight hours, work eight hours, recreate the body and mind eight hours.

Prof. Mitchell Goes to N.B.

PROF. J. W. MITCHELL, formerly of the Kingston Dairy School, and for the last few years Professor of Dairying at the Manitoba Agricultural College, has severed his connection with the latter institution and will become Director of Animal Husbandry and Dairying for New Brunswick.

Dairying is rapidly expanding in New Brunswick. It is believed that in the next few years a great development will take place.

Win!

Overland 75 Touring Car in \$1000.00 other Fine Prizes First Prize 1917, 6-Passenger Overland Touring Car, Completely Equipped.



What groceries did Brown advertise? JOHN BROWN is noted for being the first advertiser in town because of the novel way in which he advertises and creates interest.

1917 Overland Touring Car First Prize for the Best Reply

A Host of other Grand Prizes to be Awarded They include \$300.00 Indian Motorcycle, Clow Bros. Famous High Oven Ranges, 1917 Cleveland Bicycle, genuine Hoosier Kitchen Cabinet, Famous Singer Sewing Machine, Perfection Oil Kerosene Cabinet of Rogers Silverware, Mahogany Dressing Table, 1900 Washing Machine, White Sets of Books and many other big prizes of great value.

THIS CONTEST IS ABSOLUTELY FREE OF EXPENSE A FEW HINTS—A good plan is to write down on a sheet of paper all the articles or things usually found in a grocery store and then see if any of the prizes can be found in the list.

- Mr. Brown's Store you will find: Apples, Almonds, Dates, Butter, Raisins, Baking Powder, Cakes, Haddock, Cocoa, Coffee, Flour, Soap, Tea, Tobacco, Sultana Dried Fruit, Sugar, Tomatoes, Tomatoes, etc.

The OBJECT OF THE CONTEST—Frankly, this great event is intended to advertise and introduce EVERYWOMAN'S WORLD, Canada's great magazine, to hundreds of new homes, which should know that a magazine of such excellence and real worth is being published right here in Canada by Continental Publishing Co. You can easily help us to do this when you enter the contest, but you do not have to be a subscriber.

Follow These Simple Rules When Sending Your Entry.

- Write your answer on a post card and seal, using one side of the paper only. Put your name and address on the upper right hand corner. Anything other than name, name and address will not be considered.
- Entries and date under 18 years of age are not allowed to compete.
- Contestants will be permitted to submit as many as three sets of answers to the puzzle, but only one set can be awarded a prize.
- If different numbers of the puzzle will be awarded to one family or household.
- The final awards will be made by Judge's Committee of three Toronto gentlemen who have no connection with the magazine.

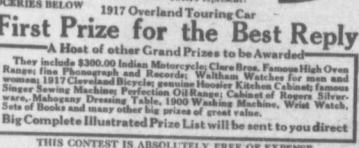
Address Contest Entry, Everywoman's World, Continental Publishing Co., Limited 121 Continental Bldg., Toronto



3rd Prize—Clow Bros. Famous High Oven Range, Value \$80.00



9th Prize—Fine Cabinet Photograph Complete With 6 Records



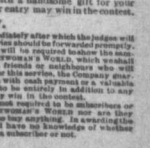
1st Prize—Famous Hoosier Beauty Kitchen Cabinet



4th Prize—Genuine Singer Drop Feed Sewing Machine



6th Prize—Famous 'Hoosier Beauty' Kitchen Cabinet



2nd PRIZE Famous Indian Motorcycle, Value \$200.00

They Are Coming Fast

Most readers of FARM and DAIRY are keen business men, as well as good farmers. They know a bargain when they see it. Our big Christmas renewal offer was announced only last week, and already a large number of subscribers have taken advantage of the money-saving offer we made and sent in their renewal

Have You Sent In YOURS Yet?

If you have not, don't let another day go by without sending it. Procrastination is not only the thief of time—quite frequently it gets away with money and money-making opportunities. DO IT NOW is a good motto at this time--DO IT NOW!

Don't Forget!

These big Discount offers are good for December only. Take them up while you can.

No. 1 To all readers of Farm and Dairy whose subscriptions have expired since November 1st, 1916, we offer renewal of two full years for **\$1.50** only.....

Or three full years **\$2.00** for only.....

No. 2 To all readers of Farm and Dairy whose subscriptions have not yet expired we offer extension renewal of two full years from the date of expiry for only **\$1.50** Or three full years from date of expiry for only **\$2.00**

Look at the label on your paper. It gives the month and year your subscription expires.

FARM AND DAIRY, PETERBORO, ONT.

Gentlemen:—
Accepting your December renewal offer, I enclose herewith the sum of (\$1.50) to cover my subscription for (two) years from present date of expiration.

Name

Correct

Address

Important.—Notice if the label on your paper is properly addressed. If not, send us the label along with this letter.

Remember The Twelve Special Numbers of FARM and DAIRY

Good Roads Annual—
Jan. 4.

Poultry Magazine Number—Feb. 1.

Orchard and Garden—
Mar. 1.

Special Dairy Issue—
April 5.

Farm Machinery—May 3.

Farm Buildings—June 7.

Automobile Number—
July 5.

Western Canada Number
—Aug. 9.

Exhibition Special—Sept.
1.

Household Number for
Women—Oct. 1

Farm Power and Coopera-
tion—Nov. 1.

Christmas and Breeders'
Annual—Dec. 6

These numbers alone are
worth the regular annual
subscription price

The Christmas Gift Problem Solved

You have a friend or relative—or several of them—to whom you wish to send an acceptable yet inexpensive Christmas gift? Better still, a gift that, commencing at Christmas time, will repeat regularly every week throughout the year—a continual reminder to him of your goodwill.

Farm and Dairy is the Answer.

Join those who arrange with us to send each week a copy of Farm and Dairy to their friends. Just think of it—52 copies, including the twelve double size special issues, as a weekly evidence of your Christmas sentiment. You cannot send a better gift at twice or thrice the price.

This is How it is Done.

1. We will renew your own subscription for one year from its present date of expiration and send a copy each week for one year to one friend for \$1.50
2. We will renew your own subscription for one year from its present date of expiration and send a copy each week for one year to two friends for \$2.15
3. We will renew your own subscription for one year from its present date of expiration and send a copy each week for one year to three friends for \$2.75
4. We will renew your own subscription for one year from its present date of expiration and send a copy each week for one year to five friends for \$4.00

We will send a card to each name you send us expressing your good wishes and telling him you have paid his subscription to Farm and Dairy for one year as a Christmas remembrance.

FARM AND DAIRY, PETERBORO, ONT.

Accepting your Christmas gift offer I enclose herewith the sum of dollars to pay for renewal of my own subscription to Farm and Dairy for one year from present date of expiration; also to pay for the subscription of friends whose names and correct mail address I attach hereto. (How many)

My Name

Correct

Address

Important.—Notice if the label on your paper is properly addressed. If not, send us the label along with this letter.

A Day Among Canada's Greatest Producing Holsteins at Lakeview Stock Farm, Bronte, Ont.

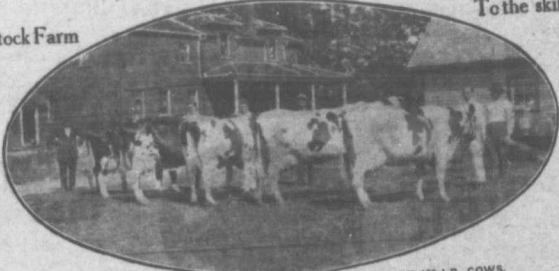


A PERSISTENT PRODUCER—A REPRODUCER—ALSO A CHAMPION.
LAKEVIEW RATTLER established a new Canadian record in mature class last March by producing 27.54 lbs. butter from 224 lbs. milk in 7 days. Her best day's milk was 107.2 lbs. and her butterfat test 4.14%.



A CANADIAN WAR TIME CHAMPION—BUT IN A MILKY WAY.
This is LAKEVIEW DUTCHLAND ARTIS, the Canadian Champion Sen. three-year-old in the 7-day division with 567.7 lbs. milk and 34.64 lbs. butter; 14 days, 1,169.5 lbs. milk, 41.57 lbs. butter; 30 days, 2,392 lbs. milk, 110.84 lbs. butter. Her average fat test was 4.83%.

Holsteins at Lakeview Stock Farm have already attained a most enviable place in the dairy world of Canada. They have proved themselves worthy of such in the splendid records of the animals here produced and in the honors won by the younger animals that have gone out from this herd.



WORTHY OF THEIR PLACE ON THE HONOR ROLL OF 100 L.B. COWS.
A few of the good females to be found in Lakeview Herd. Note their wonderful capacity, also and uniformity. Only two of them are mature, yet their average production is well above 100 lbs. per day. 100-lb. cows are more of the rule than the exception in this big herd.

To the skill and good judgment of an ambitious and experienced manager at Lakeview, belongs the credit of developing a herd not only a credit to the show ring for type, but is also an honor to the Holstein breed in their utility work. Live breeders appreciate that it is such animals that will lead the way to a higher Canadian standard of production.



MADAM PAULINE ABBEKERK—Milk 478 lbs. Butter 25.06 lbs. Average test 4.50%. Her dam, Madam Joseph Pauline, has just completed a new 7-107 test 4.50%. Her dam, Madam Joseph Pauline, has just completed a new 7-107 record of 185.5 lbs. milk, 94.28 lbs. butter; 30 days, 2,284.4 lbs. milk, 126.50 lbs. butter; 60 days, 6,450 lbs. milk, 327.50 lbs. butter; 90 days, 9,541.2 lbs. milk and 350.15 lbs. butter; 6 mths, 17,414.7 lbs. milk, 760.9 lbs. butter. Best day's milk, 118.4 lbs.



CHERRYVALE WINNER—First and Champion at the London Fair in 1911. She is also a worker, milk, 7 days, 223.3 lbs. Butter, 27.18 lbs. She is the dam of Cherryvale Peace, with 21.31 lbs. in 7 days, and of Lakeview Dairy, 68 lbs. milk, 7 days, and 23.20 lbs. butter; 30 days' milk, 2,024.9 lbs. One day's milk, 104.4. In 9 mths, she gave 17,151.2 lbs. milk. A clean-cut hard worker, Cherryvale is a favorite in the big herd.

The lover of Black and Whites will find a genuine pleasure and welcome in a visit to the magnificent herd of richly-bred Holsteins at Lakeview
LAKEVIEW STOCK FARM Major E. F. Osler, Proprietor, BRONTE, ONT.
T. A. Dawson, Manager

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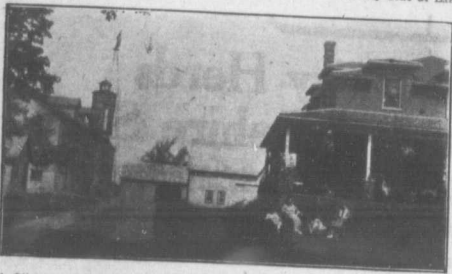
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**A DAY WITH LAKEVIEW
HOLSTEINS**

FEW outings appeal with as keen pleasure to the true dairy breeder as a day spent in closely examining one of our best herds of Black and Whites here in Ontario. The privilege was accorded a representative of Farm and Dairy one day last week, in learning at Lakeview Farms, and incidentally acquainting our readers with the fine class

of 23 to 27.84 lbs. butter in the 7 days. Abnormally high tests are not the sole aim of great general utility—four coming qualities, at a price within the reach of every Canadian farmer. Judicious information on individuals in space here is always desired, but few of them. These give some idea of the splendid work already done at Lake-



A Glimpse of the Commodious Farm Home and the Farm Buildings from the Approach to Lakeview.

of stock that have served to supply aires and dams as foundation animals to scores of dairy farms over the Province. It was his love of good dairy animals and the desire to give such to Ontario farmers that first induced Mr. Oeler (now over-exclusively to the breeding and improvement of richly bred dairy stock. The splendid success attained under the skill of Mr. T. A. Dawson has kept Mr. Oeler an enthusiast and done good work in the ever-increasing popularity of the breed. In 1905, we had in Canada 68,000 Holsteins, with an average value of \$117.00 per head—a total value of \$7,956,000. By 1915, this number had increased more than 10 per cent., and with a total value of \$14,999,000. Such an increase is exceptional, and is an indication of the status of this great breed. In addition to their wonderful ability at the pail, the Holstein is regarded by many prominent breeders, both in Canada and the United States, as the nearest to the best type of dual purpose animal.

Lakeview Farm is ideally located. Its 600 acres of clay loam lie about midway on the cement highway between Toronto and Hamilton. Bronte, the shipping station on the G.T.R., is nearby. The dairy buildings, horse barns, and nursery at Lakeview are modern in every way. The manager has that sanitary feeling that makes you want to have your morning shipment go to the Farmers' Dairy, Toronto.

In laying the foundation for Lakeview herd, only animals of the highest merit were secured. Thus, the entire herd traces directly into what are acknowledged the best strains in America. The aim has been to breed this class of higher excellence, yet at no time sacrificing their utility achievement. Practically the entire nucleus here is tuberculin tested. The females comprising it have more than a creditable showing in records of from 100 to 119½ lbs. per day, and from

view by animals from which offspring or close blood is going to all parts of the province.

The sr. herd sire at Lakeview, Dutchland Colantha Sir Mona, is a wonderful His sire is that world's greatest bull, Colantha Johanna Lad 799 A.L.O. (daughter), that stands at the head of the great herd of the Fred E. Fields Co., at distance cover of the world. Some of his world-record heifers are Dutch, Col. Vain, 22,750 lbs.; Dutch, Col. Mona, at 3 yrs., 22,264 lbs.; and D. Chana Lad (3 yrs.), 21,235.8 lbs. The dam of Sir Mona is Mona, Pauline DeKool, who produced the world's 3-yr. champion cow, Sir Mona himself as the sire of Lakeview Dutchland Artis, Canadian champion 3-yr.-old, with 34.6 lbs. butter, and is also the sire of, the grand champion at Toronto in 1915, London, 1916. He is a real bull in every way—proved by his good work.

Among the females, the honorary position must go to Lakeview Rattler, who last year established a new Canadian record. Rattler has milked continuously, and last year she established a new Canadian class. Her record in 7 days is 72½ lbs. test of 4.14%. Note her record on page 45. She is best for work. At present, Rattler has 9 daughters in the herd that are doing their bit to uphold the reputation of their dam—with records from 17 lbs. at 2 yrs. to 24.66 at 3 yrs. Her only bull calf was purchased to head the herd at the O.A.C. College.

Lakeview Dutchland Artis is another magnificent cow with 36.5 lbs. milk and 34.66 lbs. butter (over test 4.8), making Canada's highest producing 3-yr.-old in the highest producing 3-yr.-old in Canada. She is doing her part in making a remarkable showing in the yearly test, and will be head of the list. Artis is one of the finest individuals that could grace a herd, and will make a wonderful foundation.

(Continued on page 45.)

NEW BARNs, 1917

IF YOU INTEND TO ERECT

a new barn or remodel an old one, we would like to send you a plan and quotation.

You may have some old lumber or can get enough out of your woods for floor timbers, and we can supply balance at favorable prices.

DO NOT CUT OR PURCHASE ANY LUMBER

or any other materials until you get our lumber bills, as we can save you money on any type of barn you may want to build. We have erected several

STEEL TRUSS BARNs

in almost every county of Ontario, and will give you names of purchasers if desired.

If you want a wooden barn with metal roof we can help you—Ask us how, and mention the size of your barn.

THE

Metal Shingle & Siding Co.

LIMITED

PRESTON AND MONTREAL

Manufacturers of Steel Truss Barns, Implement Sheds, Storage Buildings, etc.

(See Advertisement also on page 37)

CALDWELL'S

**A Balanced Meal Ration For
Milking Cows**

Caldwell's Dairy Meal will increase the flow of milk from your herd, winter and summer. It will also keep them in better physical condition. Caldwell's Dairy Meal has done this for thousands of dairy herds—it will do it for yours.

Caldwell's Dairy Meal is always the same—sack after sack, and ton after ton. Its guaranteed analysis shows this.

PROTEIN, 20%,
CARBOHYDRATES, 51%,

FAT, 6.3%
FIBRE, 10%



Caldwell's Dairy Meal is pure, palatable, nutritious and easily digested. Secure Caldwell's from your feed store, or write us and we will supply you promptly. Booklet and prices on request. Sold in 100 lb. sacks or ton lots.

The Caldwell Feed & Cereal Co.,
LIMITED

Dundas, Ontario.

MAKERS OF ALL KINDS OF HIGH-C LASS

STANDARD FEEDS

Dutchland Colantha Sir Mona (by Colantha Johanna Lad), The Sr. herd sire at Lakeview, sire of the Canadian champion Sr. 3-yr.-old heifer cow, and also the sire of the Sr. and Gd. Chana, at both Toronto and London, 1916.

Ayrshires

The Quality Breed



Substance—Style—Breeding—Prepotency.

The outstanding feature of Ayrshire sires is their prepotency. This makes them of such special value in improving any grade herd, in both fat test and total production. A. S. Turner & Sons' London St. Champion (1916) Neherston King Theodors (Imp.).

Better Dairy Herds Through Ayrshire Sires

SHREWD dairy farmers over Canada and the United States are realizing as never before that the value of a cow or a herd for dairy purposes depends on the net returns they can give in butter fat at the pail from year to year. Not only must the production be liberal, but the fat test must be creditable.

Thousands of our grade herds over Canada could be made much more profitable by the use of good sires—sires that come from blood of high fat content, and large total production. The dairy branch has shown where this has been done in hundreds of cases over the Province. Is your herd among these?

Hobland Sunries,
The O.A.C. Sire.



1/2% INCREASE IN BUTTER FAT WOULD MEAN

Suppose we figure it out. Say that you have 12 cows (about the average for Ontario), each giving an average of 6,000 lbs. milk in a year.

It Would Mean—
30 lbs. more butter fat per cow, worth \$144.00
360 lbs. more butter fat for your herd, worth \$144.00

And this without increasing your labor or feed cost in the least.

YOU CAN ACCOMPLISH THIS IN YOUR HERD

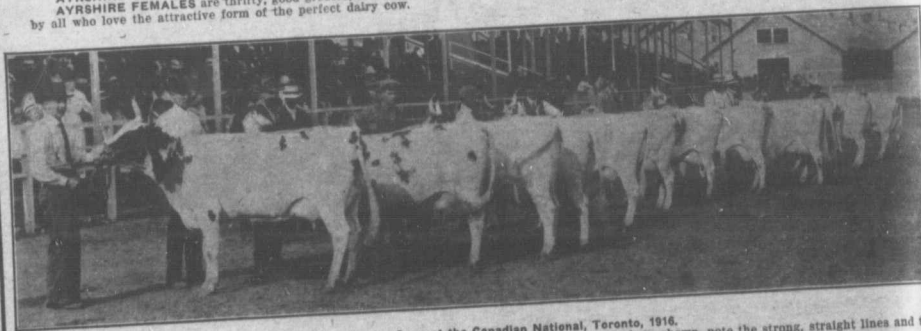
By using a good Ayrshire sire. Ayrshire bulls are known for their prepotency and easy feeding. They come of naturally high-testing, blood-hardy, thrifty, and especially suited to average farm conditions.

A good way to get a start in Ayrshires is to buy an Ayrshire bull from a good milking dam and buy a sire with a good dam and start grading up your herd. BETTER STILL, buy a registered Ayrshire cow or heifer and GET A START in pure-breds.

The Ayrshire has long been acknowledged as the economical producer among dairy breeds

THE REASON IS THAT

SHE IS A HIGH TESTER—To Oct. 30th, 1916, 823 Ayrshires in R.O.P. averaged 4%.
A PERSISTENT HEAVY PRODUCER—To May 1st, 1916, 224 mature cows gave an average of 10,254 lbs. in milk and 415.90 lbs. fat.
318 R.O.P. two-year-olds averaged 7,252 lbs. milk over 4% fat.
AYRSHIRE SIRES are very prepotent—they transmit the high-testing virtue.
AYRSHIRE FEMALES are thrifty, good grazers, and very prolific. And, above all, THE AYRSHIRE IS A SHOW ANIMAL, admired by all who love the attractive form of the perfect dairy cow.



The Aged Ayrshire Cows at the Canadian National, Toronto, 1916.

Ayrshires have a national honor and reputation for beauty and symmetry of form. In the line-up here shown, note the strong, straight lines and the wonderfully uniform udder development—beauty and performance combined.

Write for Booklet and Further Information About Ayrshires to

The Canadian Ayrshire Breeders' Association

W. F. STEPHEN, Secretary, Huntingdon, Que.



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—are neat, strong and sanitary. Heavy high carbon steel tube, and malleable fittings used in constructing Louden Equipment. No sharp corners on Louden stalls, stanchions or mangers to injure or make the cows uncomfortable.

LOUDEN STANCHIONS

—are fitted top and bottom with single chain, which gives the cow freedom to lie down and rise as she would in the pasture. High built-up curb can be used only with Louden stanchions.

LOUDEN Roller Bearing Litter Carriers

—make quick, easy work of stable cleaning. No bother with brakes or ratchets. Loads easily elevated; a light pull on hand chain does it. Box loaded or empty will stand at any height. Roller bearing track wheels give ease and steadiness of motion on the track. Heavy galvanized steel box carries a big load.

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LOUDEN BARN PLAN BOOK
112 pages of valuable information

In the Louden Plan Book is a Design for every size of Herd—Long Barns, L Barns, Round Barns, for Horses, Cattle, Hogs.



If you are preparing to build next season, you will find our book invaluable.

LOUDEN BARN EQUIPMENT

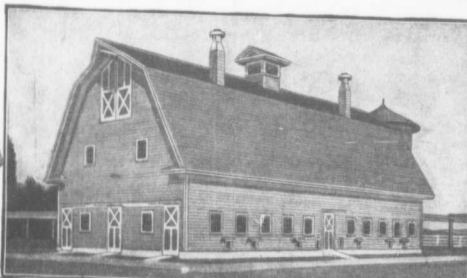
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Book of Barn Plans Free

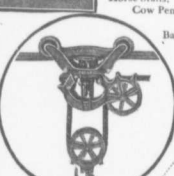
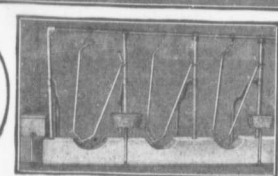
Louden "Barn Plans" is not a catalogue of barn equipment. It is a complete and valuable book of reference and instruction on barn construction. The 112 pages of Louden Barn Plans is full of dollar saving information—the best of ideas gathered by the Louden Company during many years of barn building, and barn equipment experience. 51 representative designs for cow barns, horse barns, general purpose barns and hog houses. In addition, there are 32 pages devoted to general construction problems, such as concrete work, laying floors, roof construction, ventilation, etc.



Louden equipment makes possible a clean, sanitary barn with a minimum of expense for upkeep. When cows are transferred from dark, dirty barns to Louden barns, the milk flow often increases from 15 to 25 per cent, and the labour of caring for the herd is reduced from one-third to one-half.

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Please send me copy of Loudens Barn Plans. I expect to build (or remodel) barn for

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Barn will be about x ft.

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The Lister Gasoline Engine
 BUILT IN ENGLAND AND SOLD ALL OVER THE WORLD
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