

Tenth Annual Christmas and Breeders' Number

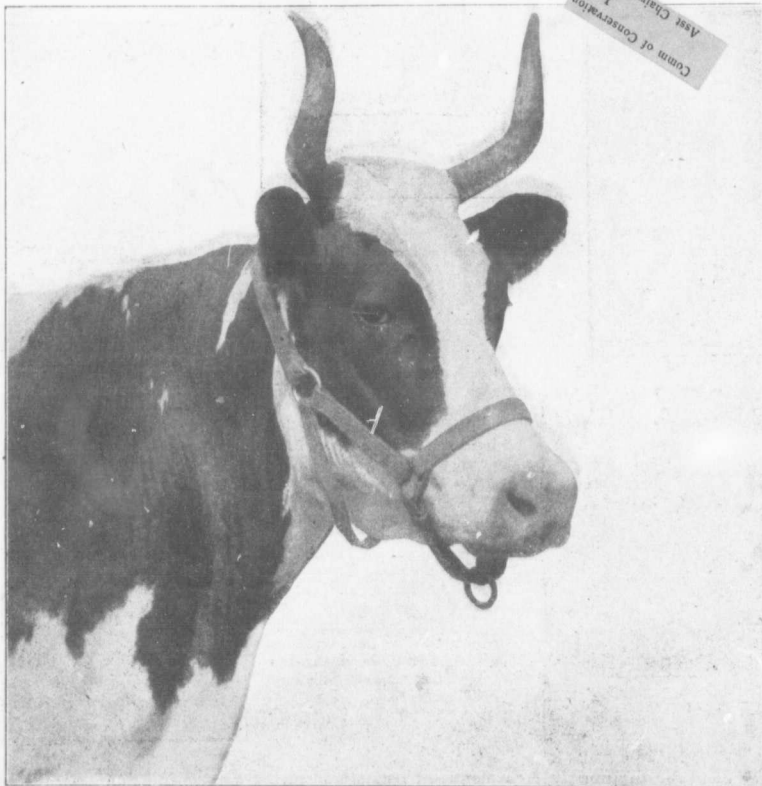
FARM AND DAIRY & RURAL HOME



DEVOTED TO
BETTER FARMING
AND CANADIAN
COUNTRY LIFE



Toronto, Ont., December 6, 1917



Cum gratia
Jan 11
Asst Chairman

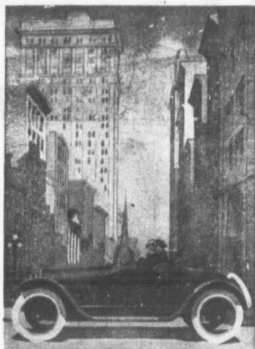
LOCKFERGUS SNOW—A STUDY IN AYRSHIRE CHARACTER.

ISSUED EACH WEEK.

Address all Correspondence to
The Rural Publishing Co., Limited, Peterboro, Ont.

ONE DOLLAR A YEAR.

CANADA'S STANDARD CAR



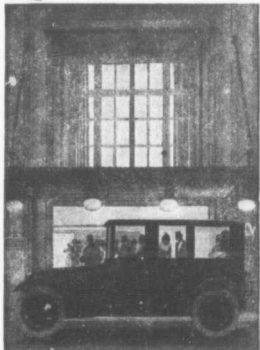
McLaughlin 3-Passenger Roadster E-6-41



McLaughlin Touring Coupe E-6-46



McLaughlin E-6-45 Special



McLaughlin 7-Passenger Touring Closed Car E-6-50



McLaughlin 7-Passenger Touring Car E-6-49



McLaughlin "Light Six" E-6-63



McLaughlin 5-Passenger Touring Car E-6-38

THE nation-wide reputation for the matchless efficiency of McLaughlin motor cars is the result of honest and persistent efforts in perfecting right principles of mechanical construction.

The McLaughlin valve-in-head motors have again been improved and furnish more power from gasoline than any other type of motor.

The art of coach building has been our pride for forty years, and our 1918 models in body design and beauty express our ideals, and anticipate the coming styles.

The quality of McLaughlin cars backed by the excellence of McLaughlin service makes the McLaughlin the best buy for Canadians.

Send for the new 1918 catalogue of Series "E" giving description and prices

The McLAUGHLIN MOTOR CAR CO., Limited, Oshawa, Ont.

12 Branches in leading cities.

Dealers everywhere.



FARM AND DAIRY & RURAL HOME



We Welcome Practical Progressive Ideas.

The Recognized Exponent of Dairying in Canada

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. XXXVI

TORONTO, ONT., DECEMBER 6, 1917

No. 49

The Outlook for the Live Stock Breeder

A Survey of World-Wide Conditions and a Review of Factors Which Encourage Optimism.—By the Editors

AFTER this war the American continent will be in possession of an invaluable asset—the major portion of the world's seed stock of horses, cattle, hogs and sheep. The need stock of Germany, Belgium, France and other European countries has been depleted so severely that a few months more of war may mean almost extermination. Great Britain is faced with the prospect of heavily reducing her pure bred flocks and herds if the war continues and lack of food may force Holland and Denmark to adopt a similar policy this winter. The civilized world must have a supply of animal food both now and in the future, and the necessity for that supply is the best guarantee of the present and future stability of the live stock breeding industry in America.

To analyze the situation a little more intimately, we find that in the case of hogs, Europe is just 23 million short of her normal supply. The Canadian hog population numbers three and one-half millions. The shortage in Europe is, therefore, 10 times as great as our total hog population, and if the war continues for any length of time, it is believed by those who are in the best position to know that the European hog will be completely exterminated. Hogs, of course, have been depleted more rapidly than other kinds of live stock. The reason is not far to seek. Hogs eat grains which can be used more economically for human food in their raw state than when turned into pork. Cattle and sheep can subsist on roughage and pastures which do not supply human food directly and flocks and herds, therefore, will not be depleted to the same extent as swine. Even in the case of cattle and sheep, however, the decrease in Europe's live stock population must be serious. Before Germany began her submarine campaign Canada and the United States were shipping hundreds of thousands of tons of hay across the Atlantic to feed the horses in the allied armies. Ocean space is now too valuable to be used for shipping anything so bulky and heavy, grown on European farms, which up to a year ago was used to sustain cattle, sheep and farm horses, must now be diverted to military purposes. This alone will mean a serious reduction in the amount of farm live stock. Add to this the fact that the British government, the French government, and the Italian government, have all directed that a certain percentage of the pastures be plowed up for grain and we can account for a still further depletion of herds and flocks.

An Authority Speaks.

This decrease in live stock is out of all proportion to the decrease in population. The situation after the war must be self evident. We will have the greatest scarcity of live stock the world has ever known. With these conditions

in mind, one of our best authorities on live stock markets, Mr. Arthur G. Leonard, President of the Chicago Union Stock Yards, recently said:

"When the American farmer does wake up to the true significance of this great struggle, he will see that preservation of breeding stock on farms is one of the most vital factors to all the people of every nation, in order that the world's rapidly disappearing supply of meats, wool and leather may be replenished. Everything points to a continuance of the war for some time to come. The world's needs will increase as the war goes on. Is it not plain that the demands upon agriculture for food and clothing will grow greater and greater with each month of destruction; that it will be impossible to produce an adequate

supply, especially of animal products, such as meats, leather and wool, unless breeding herds are maintained, and that such demands and the needs for breeding stock to replenish the wasted herds and flocks will continue long after the war ceases; that this country must be looked to mainly for such supplies and breeding stock, and that those American farmers who are wise enough to realize this fact and prepare for the world's coming greatest needs which are inevitable, will reap the greatest rewards for their foresight, in both money and the gratitude of their fellow men?"

"The short-sighted policy, which strangles the bird in hand and lets those in the bush fly away; which, for the sake of a few extra dollars now, sacrifices breeding stock and thereby destroys the foundation for supplying the world's future needs, not only deprives this nation of vital necessities in its struggle to help the world, but also takes away the foundation for the abundant profits that would otherwise be the sure reward for waiting and developing the opportunity which is thus afforded."

Future of the Grain Market.

Such is the opinion of one of our authorities. Many others, including our own Prof. Geo. E. Day, hold the same view. They believe that the market of the stock farmer is assured. Now what is the future of the grain farmer? In an address to United States farmers recently, Mr. Herbert C. Hoover spoke as follows:

"With the stimulation of \$2 wheat, we are going to have a very much increased acreage in 1918. If climatic conditions are right we should have 1,000,000,000 bushels. If the war continues this wheat will be vitally necessary; but if the war should come to an end there will be no foreign market for at least 400,000,000 bushels of this wheat. The government must then take over the wheat and probably find a market for it at a very great loss."

The position of the producer of raw products is always insecure, and it is more insecure in war time than in times of peace. Consider further the position of the wheat farmer. Australia already has the wheat of two harvests in her storehouses. This wheat has not been moved because of the long haul and shortage of shipping. Even Russia, torn by internal dissensions and the productive capacity of the people at a minimum, must still have tremendous stores of wheat, which would be let loose on the markets of the world were peace to be declared. British India, which is an extensive exporter of wheat, is in a similar position to Australia, and with the declaration of peace and the releasing of ocean tonnage, the crops of both of these countries

(Continued on page 17.)

Tiny Tim's Christmas

From "A Christmas Carol"

THERE never was such a goose. Bob said he didn't believe there ever was such a goose cooked. Its tenderness and flavor, size and cheapness, were the themes of universal admiration. Eked out by apple sauce and mashed potatoes, it was a sufficient dinner for the whole family; indeed as Mr. Cratchit said with great delight (surveying one small atom of a bone upon the dish), they hadn't ate it all at last! Yet, everyone had had enough, and the youngest Cratchits in particular, were staggered in awe and on to the eyebrows! But now, the plates being changed by Miss Belinda, Mrs. Cratchit left the room altogether nervous to hear witnesses—to take the pudding up and bring it in.

Oh, a wonderful pudding! Bob Cratchit said, and calmly, too, that he regarded it as the greatest success achieved by Mrs. Cratchit since their marriage. Mrs. Cratchit said that now the weight was off her mind, she would confess she had had her doubts about the quantity of flour. Everybody had something to say about it, but nobody said or thought it was at all a small pudding for a large family. It would have been flat heresy to do so. Any Cratchit would have blushed to hint at such a thing.

At last the dinner was all done, the cloth was cleared, the hearth swept, and the fire made up. The compound in the jug being tasted and considered perfect, apples and oranges, were put upon the table, and a shovelful of chestnuts on the fire. Then all the Cratchit family drew round the hearth in what Bob Cratchit called a circle, meaning half a one; and at Bob Cratchit's elbow stood the family display of glass. Two tumblers, and a custard cup without a handle.

These held the hot stuff from the jug, however, as well as golden goblets would have done; and Bob served it out with beaming looks, while the chestnuts on the fire sputtered and cracked noisily. Then Bob proposed:

"A Merry Christmas to all, my dears. God bless us!"

"Which all the family re-echoed:

"God bless us every one!" said Tiny Tim, the last of all.

Shall We Tolerate Tuberculosis in Our Dairy Herds?

The Serious Aspects of the Situation and Methods of Safeguarding the Healthy Herd Discussed

By Professors H. Barton and E. S. Archibald



The herd at Heart's Delight Farm is as healthy as it is beautiful. The tuberculin test is used regularly.
—Cut courtesy Holstein-Friesian World.

A \$2,000,000 Disease

Prof. H. Barton, Dept. of Animal Husbandry, Macdonald College, Que.

AT least two million dollars is the present annual toll exacted by bovine tuberculosis in Canada; yet we like to speak of our live stock as being free of disease. Other countries may share the tuberculosis situation with us, but, for a comparatively new country, our position calls for little boasting. Moreover, information from various sources indicates that in spite of certain combative efforts the disease is probably increasing.

In times of food shortage such enormous waste seems most regrettable. The problem of at least checking, if not eradicating this increasing menace, may not be easy of solution, and perhaps, because of war conditions, presents no immediate opportunity for being dealt with in any very large or complete way. Nevertheless, it should not be dismissed. Something more than is being done now is possible and is imperative.

It seems to me that before deciding on any operation plan a proper appreciation of the situation must be made. It may not be possible to overcome every obstacle, but, in any case, the obstacles should be located. It is the purpose of this article to find and to briefly analyze a number of the more important of them.

Attitude of Stock Owners.

The first and most important of all obstacles is the prevailing attitude of the stock owners toward the disease. They are content to tolerate and harbor it, making little individual and no collective effort to eradicate it. Why this attitude, then, if the disease is as destructive as the above figures represent?

First, the nature of the disease and its behavior; it varies in virulence; it is often slow to claim the individual victim, while, at the same time, many others may have been infected and

the general effects of it attributed to other causes.

Second, the loss is apt to be much distributed. Third, it is possible to traffic in diseased animals.

Two general methods may be employed in meeting the above obstacles—education and regulation. We have not had anything like enough of either. The agricultural press, and every other educational agency, cannot overdo the lesson. If a large representation of our stock men really understood tuberculosis, its dissemination, and its recognition, the fight would be almost won. There is urgent need for continuous educational propaganda in these three phases: Nature of the disease, dissemination, diagnosis. Knowledge of these three is essential for both prevention and eradication. Technical treatment of them for the public is no good. It must be commonplace, popular presentation, based, of course, on technical teaching. In a word, simplified application is what is needed in educational work.

Facilities For Dissemination.

Second obstacle—facilities for dissemination. These, of course, arise out of the first and also because of insufficient regulation. Exchange, purchase, and sale of stock for farm use must in any case tend to distribute the disease, but, unfortunately, only to a very limited degree is any attempt made to minimize this distribution. Our auction sales are glaring illustrations of this. They afford, perhaps, our largest channel for exchange of stock, and I think it may be safely estimated that for not one per cent. of the animals is any certificate, much less guarantee, given or asked for. This is true even of high priced stock. I doubt very much if any improvement in this respect can be registered from year to year. Moreover, while there are many genuine auction sales, and the sale may serve a very useful purpose in the interests of live stock, it is reasonable to suppose, in fact there is reason

to believe, that not infrequently disease is the origin of the sale. What is true of the public sale is also too true of private sale, but of the two the auction is apt to work on a larger scale.

By-products from creamery and cheese factory are without doubt another fertile channel. Pasteurization is a simple and effective safeguard. It would mean some extra outlay and some added expense which perhaps the war may hinder for some little time, but which would be a sound investment and which should be made compulsory at the earliest possible moment. It has been optional too long, and like many other forms of so-called liberty is more often rank injustice and thoroughly undemocratic.

Purebred Stock and the Purebred Herd.

It is a regrettable fact that there is a great deal of tuberculosis among our purebred herds, and that they are often fountain-heads for distribution. The grade or mongrel herd is an easier proposition to deal with, purely because of commercial value. The loss over and above beef value is not great; whereas, in the purebred the apparently higher value makes it seem necessary to retain the infected animal, or dispose of it on a breeding value basis, thereby peddling the disease. Notorious animal pedlars of this kind have not been uncommon. There is reason to believe that the imported animal, with nothing more than a punched ear to discourage him, has made no small contribution to tuberculosis in this country. The time has long since gone by when some means should have been devised to prohibit the importation of recognized infectious disease. This is one obstacle, presenting difficulties no doubt, but which can and should be overcome.

Tuberculin Use and Abuse.

The prevailing attitude on the part of the partially informed is not one of confidence in tuberculin testing. To the selfishly inclined, and this is no small class, the shortcomings of the test naturally make a greater appeal than do its ad-

vantages. To those who are in a position to judge and to appreciate the test, there is no question as to its value in combatting tuberculosis in cattle. Those who are in a position to know have been far too modest in their claim for it.

One other phase has to do with the unscrupulous. Those who belong to this class consider they are very well informed. Probably the number is not large, but they are not negligible nevertheless and the public should be so advised. It is possible through no fault of the test to defeat its object in various ways. Circumstantial evidence as to the man, animal, etc., furnish some guide as to reliability. Retest after a short period is the real safeguard and in any case is advisable.

It should be possible to create a much wider use of the test. It is the most effective weapon available with which to combat the disease. The great majority are not familiar with it, are afraid of it because of what it may reveal, and will take no chance on having it applied when any publicity is likely to accompany it. This condition should be appreciated and met. Private testing should be encouraged and facilitated in every way. The legitimate definite action that may be taken to clean up a herd, when a given result with the test is obtained, should be clearly outlined and given the widest publicity.

The Grade Herd.

The partially infected grade herd does not present a difficult problem and individual herds with 75 per cent. reactors have been freed of the disease with little loss in a surprisingly short time through the agency of the test.

Legislative regulation has thus far not proved very far reaching in this country. No destructive criticism, however, and no idea of definitely outlining further enactment is intended in this article. Nevertheless, it must be apparent that more stringent regulation could in itself surmount some of the obstacles that now obtain. Moreover, it is the necessary complement of education, and progress in one should be accompanied by progress in the other.

Finally, the extent of territory which the disease has already invaded, and in all of which the above obstacles are to be found, makes it seem doubly difficult to attack directly and vigorously. To simplify the operation I doubt if a better plan could be suggested than that mentioned in the last report of the Secretary of Agriculture in the United States, the idea being to concentrate on certain communities, counties, or districts, at any rate limited areas. It is reasonable to expect that various local agencies and organizations could be interested in such an undertaking if the matter were approached intelligently and rationally. Many large movements start in a small way. There are enough clean herds in numerous communities to quickly form a nucleus if they were officially declared. Why not institute a "clean sheet" movement for the individual herd and for the community? Individual breeders here and there are cleaning their own herds. One province and several states are taking a hand in "clean up" campaigns. The movement will soon be universal.

Safeguarding the Healthy Herd

Prof. E. S. Archibald, Dominion Animal Husbandman, Ottawa.

IN all probability the percentage of dairy or beef herds in Canada which are entirely free from this dread disease is amazingly low. The farmer who is so fortunate in already possessing such an asset should guard it most jealously, while his less fortunate neighbor in honesty to himself and his future herds and in justice to other breeders to whom he sells stock, and above all to the consumers of his milk, should discover at once the true condition of his

best means of diagnosis so far discovered yet, they are by no means infallible. The herd which passes the test once is probably clean, but there may be an animal in which the disease has become established, yet not sufficiently to cause a reaction, or what is worse, there may be an animal so badly affected that it will not react. Either animal may in a few months become a spreader and infect all animals in its vicinity. Hence there is need of at least two tests at six months intervals to positively determine the health of the herd. The subject of guarding the healthy herd is worthy of brief analysis and can be handled with under the three following headings:

Sanitation.

It is a well known fact that the germ of bovine tuberculosis is readily killed by direct sunlight, hence dust blown from one farm to another will not be a means of transmission of the disease. However it is not impossible to carry the disease on manure spreaders, etc., though the ordinary humane sanitary treatment of the herd would prevent its introduction in this way. Proper sanitation may be classified as follows:

1. Sunlight is the first essential. The narrow stable, 36 to 42 feet in width, with sufficient glass, at least 10 sq. feet per cow, allows the sun to reach every corner. Sunlight is the surest and cheapest disinfectant. The wide dark stable is a sure breeding ground for the disease if it ever becomes established therein.

2. Cleanliness. Sunlight and disinfectant cannot destroy the disease germ without direct contact. Manure caked on floors and walls, mouldy feed and cowsheds on walls, in fact dirt of any description in the stable, harbors the disease and prevents its eradication. Walls and ceilings whitewashed regularly twice per year are sanitary and attractive and in the added cheerfulness of the stable will be repaid by increased milk flow.

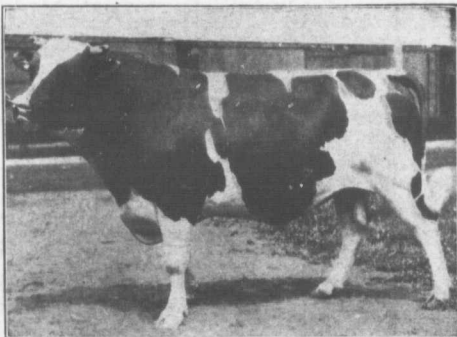
3. Fresh air. No system of ventilation is perfect or will work automatically under all conditions. However, any good system properly handled will provide the very necessary inflow of pure air and outflow of foul, moist air. The damp stable in which the air is always close or the foul stable are most conducive towards the spread of this disease. Incidentally good ventilation will pay handsomely in increased milk flow.

4. Disinfection. The common practice of using disinfectants only after an outbreak of any in-

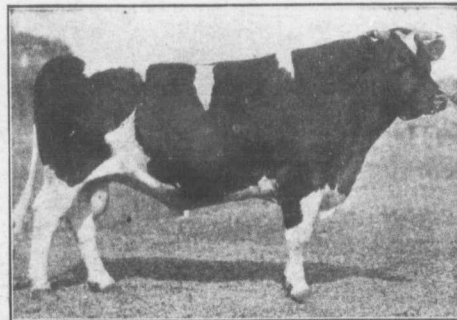
fectious disease and even then not too thoroughly, is a fair example of ignorance or carelessness in sanitation. If the walls and ceilings need cleaning and disinfecting by whitewashing at least twice annually, how much more important is it that the walks, mangers, stands and gutters be thoroughly scraped and soaked with disinfectants at least every spring and fall. Any good coal tar disinfectant, such as Wescol, Lysol, Zenoleum, Cresol, Crealin, etc., used in strengths of 3% to 8% will kill all disease and vermin. The cost would be met in increased production alone, but if not, the cost of a few gal-

(Continued on page 42.)

TWO CHAMPIONS—TAKE YOUR PICK



Above is Lakeview Dutchland Hengerveld 2nd, owned at Oak Park Stock Farms, Brantford, Ont., grand champion Holstein bull of the Canadian show circuit for two years. Below is Oak DuKoi Dille Homestead, owned at Iowa Farms, Iowa, grand champion at the National Dairy Show in both 1916 and 1917. If you were judge, where would you place the red ribbon?



herd and by sane and economic methods cease to be a menace to the live stock industry and to human life.

The general aspects of bovine tuberculosis and the methods of eradication, have been dealt with so ably in this journal that no further comments are necessary. However, as a preface to the few comments on the subject of safe guarding the clean herd, the writer wishes to highly commend the article, "The Eradication of Tuberculosis from the Dairy Herd," which appeared in Farm and Dairy of October 11, 1917. To the farmer unacquainted with the tuberculin tests it is but fair to state that although they are the

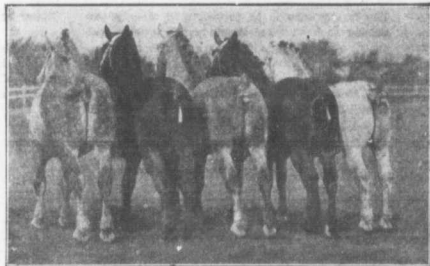
FUTURE horse markets will demand drafters. Good blocky horses of from 1,400 to 1,750 lbs. or over, will always find a ready market at remunerative prices, but the driver or "general purpose" horse weighing less than 1,300 lbs., must in the near future take his place in the boneyard. Such seems to be the consensus of opinion among those who are in closest touch with horse markets.

The rapid introduction of motor-driven vehicles during the past decade has had its effect on the horse breeding industry. Horses have come into direct competition with automobiles, motor trucks and tractors. And as in all other struggles in nature, it will be a case of the survival of the type of power which is best fitted for each kind of work. In this competition the light horse has already been worsted. He has been superseded on the highway by the automobile, and in the field his place is being taken by a heavier type of horse—one that can haul larger machinery and so cut down on the driver's time.

The purchase by the allies of large numbers of these average horses for military purposes has so far prevented the drop in their prices which was naturally coming to them. But with

The Future of the Horse Breeding Industry

The Day of the Small Horse Has Passed But Drafters Need Not Fear Future



"No matter how many tractors, motor trucks, or motor cars are built the draft horse will be needed."

regard to future prospects for this average horse, a Chicago dealer who has bought 150,000 horses for the allied governments, has this to say: "When it comes to the question of the price that the farmer will be able to demand in the near future for the kind of horses typical of present day working stock the country over, I certainly

firmlly as does the power truck where long hauls, heavy loads, high speed and good roads are to be found. The same is true of the farm as of the city. The tractor is a necessity on the farm where furrows are long, loads heavy and where operations are carried on on a long scale. But

(Continued on page 12.)

can't qualify as an optimist. My guess is that before very long—certainly after the war ends—this animal will be selling for 50 per cent. less than now."

Drafters Will Be Needed.

When it comes to the quality horse of 1,400 lbs. or more—the horse with sufficient weight and power to make him an economical worker, the case is different. True, the motor truck and the tractor have come in to assist with the heavy work formerly done by horses alone. But these cannot replace the heavy horse. Each has its own work which it can do more economically than the other. We have the power truck and the tractor because the work to be done has outgrown the capacity of the horse.

The horse is now definitely placed as the master of the short haul, the short turn, the in-and-out work of the congested districts of cities and towns and the tillage work of the small fields. He holds his place in handling such jobs as

"I DON'T know how we would have kept up with our work this summer, had it not been for our milking machine," remarked W. W. Ballantyne, of Stratford, between the judging of classes at the Western Fair, London. Mr. Ballantyne was busy. He was judging both Jerseys and Ayrshires, but a glance over the ring showed that the coast was still clear, so he continued with his story. "We hesitated a long time before we decided to install a machine. We had heard of men who had put in milking machines and the results were so unsatisfactory that they threw them out again. Some of these machines, we understood, had injured the cows' udders and we couldn't afford to risk anything like that in our pure bred herd. Finally I had a chat with D. C. Flatt at Hamilton. He recommended his machine so highly that we ourselves put in a machine of the same make."

"And how is it working?"

"Great! Simply great!" replied Mr. Ballantyne enthusiastically. "Like everyone else we have been short of help. My son and I have been alone most of the time and we would have had to reduce our herd had it not been for the machine.

Milking Machines for Dairy Cattle Breeders

Testimony for and Against Their Use in the Pure Bred Herd

As it is, we have gotten along very nicely with our full complement of cows."

"And no trouble?"

"No trouble, but engine trouble," affirmed Mr. Ballantyne. "My son handles the machine continually. We strip after each cow. We have saved a lot of time milking and the machine is now indispensable."

Mr. Flatt's Experience.

Just last week an editor of Farm and Dairy chanced to meet the junior member of the firm of D. C. Flatt and Son. Remembering the source of Mr. Ballantyne's information we asked Mr. Flatt if he was still as well pleased with the milking machine as he had been when he advised Mr. Ballantyne to put one in.

"I can say that our milking machine is doing very nicely indeed," was the unhesitating reply. "It does better than the rank and file of milkers we can get. It has been giving good service for over two years now. It is the special care of one man who works with three units and strips after the machine."

ing and stripping. Some cows don't strip much, but we insist upon it that they all be stripped whether they give any milk or not."

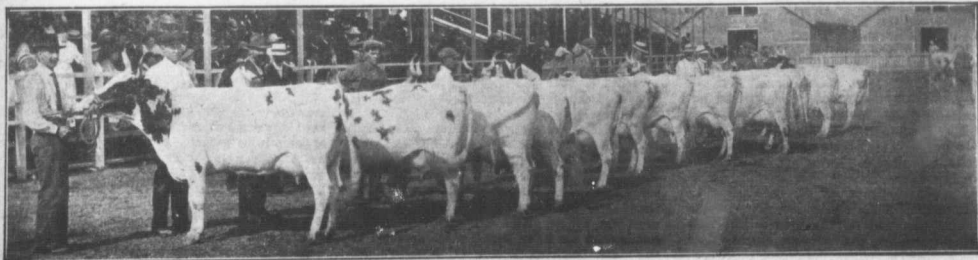
"And you use it on your best cows?" we asked, having in mind some of the Canadian record animals that are owned in the Flatt herd.

"Yes, all of them, and we do not consider it a risk either."

The Other Side of the Question.

The testimony of such well known dairy cattle breeders as W. W. Ballantyne and D. C. Flatt and Son, makes a strong case for the milking machine. A few minutes after our conversation with Mr. Flatt, we asked a well known Ayrshire breeder from Elgin county, whom we knew was up against the labor problem good and hard, if he had ever considered the milking machine. "Yes, we have considered it," he replied, "but on the whole it has not given satisfaction in our district. One of our nearest neighbors thrives his machine out over a year ago. We have reports of others who have done the same. These

(Continued on page 16.)



A string of Ayrshire Beauties, some imported and some home-bred, but all triumphs of the Breeder's Art.



Tractors must have pedigrees before they will be used on Crystal Spring Farm where everything is pure-bred.

How a Young Farmer Broke Into Pure Breds

The Story of D. A. McPhee, Giving Methods Which Have Brought Him Success

S. R. N. HODGINS, Associate Editor Farm and Dairy.

CAREFUL buying, careful breeding, careful feeding—these have brought success in his work with pure bred stock. D. A. McPhee, of Vankleek Hill. Donald is a young farmer who went into pure bred stock carefully and built up his herd, as contrasted with the "millionaire" breeder who gathers together a herd by virtue of his large bank account. For this reason Donald has never bought much high priced stuff, preferring to buy quality stock while yet in the calf stage, and by generous feeding raise up something that will be a credit to his stables.

Fifteen years ago Mr. McPhee took over from his father the management of Crystal Spring Farm. At that time mixed farming was carried on with a stock of grade animals. Dairying was the most important line. Donald, on taking up the reins of government, conceived the idea of building up a pure bred herd of cows and selecting Holsteins as his breed he purchased a pure bred bull calf from Matt Richardson of Caledonia. With the purchase two years later of a pure bred heifer from the same source he laid the foundation for his present herd. In the spring of 1916 he held a dispersion sale of 80 pure bred cows that put him on the map as a Holstein breeder. With a start of 50 pure bred calves already in his stables he is laying the foundation for a bigger and better Holstein herd than ever.

The Home of the Herd.

Crystal Spring Farm is situated two miles west of Vankleek Hill. It is a goodly estate, comprising in all 320 acres, 100 of which are cultivated. This leaves plenty of pasture for the live stock farming which is carried on, and this abundance of pastures is one of the factors which have made Crystal Spring Farm a prosperous one. The cultivated area is in fine till and much of it is underdrained. "Our yields per acre have doubled during the last 15 years," said Mr. McPhee as we drove back along the lane that runs through his farm. "This is due largely to the increased number of live stock kept and to the increased fertilizing value of the manure, resulting from the feeding of concentrates to the stock."

Yes, Crystal Spring Farm is a big, comfortable homestead with a big, comfortable home and big, comfortable barns flanked by two 16x30 foot silos. The visitor is at once struck by the neatness of the yards and buildings

and the conveniences enjoyed by the workers. From a never-failing spring on a small hill near the buildings, crystal pure water is piped to the barns, dairy and house. The water thus flows through all the buildings all the time, and it is from this supply that the farm takes its name. The cattle barns are equipped with a two double-unit milker which, by the way, Mr. McPhee considers indispensable in present day dairying. And between the house and barn is a commodious dairy where the milk is cooled by running water, and in which the gasoline engine used to operate the milker also runs an electric generator supplying, through the medium of 41 bulbs, light to the house and all the farm buildings.

A Start With Pure Breds.

The foundation for the Crystal Spring Holstein herd was laid 15 years ago when Donald McPhee purchased a pure bred bull calf for use on his grade herd. This first bull was kept four years, and although he was used on a herd of grade Ayrshires the 42 head of stock from him were all black and white. This gave Mr. McPhee the idea of establishing a herd of pure bred Holsteins. Two years after the first sire had been purchased two more calves were bought from the Richardson herd. One of these was a bull calf, a son of Johanna Rue 4th Lad, and under Mr. McPhee's management at four years of age he won first in a strong class at the Central Canada Exhibition. The heifer, Spinky Clothilde DeKol, was the

foundation cow on which Mr. McPhee's pure bred herd was built. This cow at 14 years of age made an R. O. M. record of 22.34 lbs. butter and 495.3 lbs. milk.

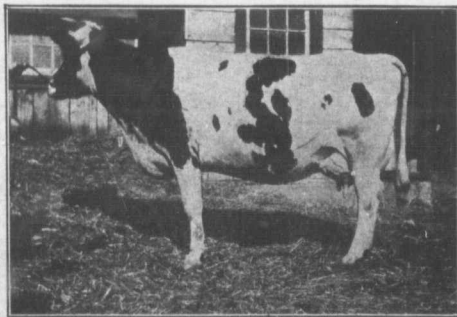
The method by which Mr. McPhee built up his pure bred herd was by buying his stuff young and developing it himself. He has made it a practice to always keep the best herd sire he could possibly afford, and with his ideal of a fine type Holstein showing plenty of quality and dairy conformation, he has built up a herd which may be spotted anywhere by those who know his stuff. Mr. McPhee has kept closely in touch with sales of Holsteins and has often picked up something very good at a moderate cost. He buys according to the type he has fixed in mind, takes his stuff home and gives it a chance to show what it can do in test. Any cow not coming up to his ideal from the producing end must get out.

In this connection it is interesting to know that Mr. McPhee bought Jessie DeKol of Crystal Spring while young for \$40. A couple of years ago, while he was preparing another heifer for the R. O. M. test, Jessie freshened. The two heifers stood side by side in the stable. They were the same age—four years old. It occurred to Mr. McPhee that he might as well have Jessie tested at the same time the other test was being made. To his surprise she gave in the seven-day test 29.57 lbs. butter from 53.7 lbs. milk with a test running up to 5 per cent. fat. Because of this test Mr. McPhee was able to realize for her at the dispersion sale \$690. "Had it not been for the test," said Mr. McPhee, "Jessie would have sold for \$150. There is nothing like the official test to show us what we have in our stables."

Methods That Brought Success.

Mr. McPhee has always believed in generous feeding from the time the calf is dropped until the aged cow finds her way to the butcher. As he ships his milk to Montreal he is like many other breeders, chary of feeding whole milk to his calves. Such a system would make his stock very expensive to raise. But the calves do not go without their milk. Grade milkers are bought in the spring to act as nurse cows. One or two calves are put on each milker and they are all put out on pasture. In this way the calves keep growing right ahead

(Continued on page 22.)



Jessie DeKol of Crystal Spring.

A good advertisement for the official test. She was bought as a youngster for \$40, and on the strength of her 29.5 test, sold as a 4-year-old for \$690.

A Very Merry Christmas



The business of being a man has its advantages these days as well as its responsibilities—especially if someone thinks enough about him, his needs and his wishes, to choose for his Christmas gift

The Gillette Safety Razor

Most men are practical. The welcome gift is the useful gift—the Gillette—that fits right into a man's intimate personal life, makes things easier for him, and proves its quality by the way it shaves.

At any good Hardware, Drug or Jewelry Store you can pick out a Gillette Set that will be sure to give him lasting pleasure. If you have any trouble getting what you want, write us and we will see that you are supplied.

GILLETTE SAFETY RAZOR CO.
OF CANADA, LIMITED,

Office and Factory: Gillette Building, Montreal.

281

MADE IN CANADA

WORLD OVER

VERY FEW FARMERS REALIZE THE IMPORTANCE OF APPLYING FERTILIZER TO GRASS LANDS

but a dressing of Sydney Basic Slag will work a marvelous change in poor meadow and impoverished pastures, and will amply repay the outlay.

If you want to grow more hay to the acre, or feed more stock on the same acreage, and what is of equal importance, fatten them quicker, send us your name and address and our representative, who is a fertilizer expert, will call and tell you about Sydney Basic Slag. He will also put you into communication by telephone at our expense with prominent Ontario farmers who will give you their experience of our goods. We only ask you to buy Sydney Basic Slag if we can satisfy you it is in your own interest to use it. If we are prepared to risk our money in paying you a visit, isn't it worth your while to learn what our goods can do for you?

THE CROSS FERTILIZER CO., LIMITED
SYDNEY, NOVA SCOTIA

FEEDERS CORNER

Conducted by E. S. Arnibald.

Tonic for Milk Cows

ONE of our cows is off in condition. As a general rule when fresh she milks around 50 lbs. a day. She freshened this time very thin, although she had been well fed and has not gotten above 36 lbs. of milk daily. Her appetite seems good. Would you suggest a tonic for this cow?—J. W., Peterboro Co., Ont.

It would be impossible to offer any suggestions as to the cause of peculiar condition in your dairy cow. I would certainly advise you to get a competent veterinarian to make a careful diagnosis of this particular case. It is probable that this sudden decline in flesh and in milk flow may be due to some local disturbance such as the teeth or the digestive tract, but it might be due to some more severe trouble, such as any one of a number of diseases, amongst which is tuberculosis. If you cannot obtain the immediate services of a veterinarian, I would advise you to change the diet, give warm stimulating foods, increase the grain ration as needed and give a tonic. I have found that an excellent tonic for this purpose may be made from 100 pounds oilcake, five pounds Epson salts, five pounds charcoal, three pounds powdered gentian, three pounds fenugreek, five pounds common salt and four pounds saltpetre. This tonic can be given with the regular grain mixture at the rate of about a small handful per feed.—E.S.A.

The Value of Clover Straw

WHAT is the value of alfalfa and clover straw as a feed for live stock? We have had several considerable alfalfa and clover for seed this year for the first time. What would be the feeding value when hay is scarce? Would you advise feeding it this year when good clover hay is obtained at \$1 to \$1.5 a ton? How would it compare in feeding value with oat straw?—R. E. T., Simcoe Co., Ont.

I do not know that any exhaustive experiments have been conducted to show the value of threshed alfalfa and clover straw. However, it is well known that 50 per cent. of the weight and at least 50 per cent. of the protein and fat is contained in the leaves of alfalfa and clover, hence, when these are lost, the food content of the remaining straw is comparatively small. In addition to this, about four-fifths of the crude fibre is contained in the stems, and this high percentage of fibre would detract very largely from the digestibility of the elements of food value. If it doubtful if this alfalfa and clover straw could be fed economically in large quantities when clover hay of good quality could be procured at \$7 per ton. It is probable that the straw from the alfalfa and clover, if consisting largely of the stems, would have about twice the nutritive value of oat straw, but this would be increased in proportion to the amount of leaves which might be contained in this straw.—E. S. A.

Feeding Value of Potatoes

WHAT is the feeding value of potatoes? We are just digesting a large acreage and in cases like the market slump, we would like to know what they are worth to us at home. Please give me an estimate of their value per acre for both dairy cattle and hogs. Would it be necessary to boil them? How much meal should be fed to hogs along with potatoes?—Subscriber, Durham Co., Ont.

A large number of experiments conducted in Canada and elsewhere have demonstrated that potatoes, if cooked and properly fed with grain, have comparatively high food value, both for dairy cattle and hogs.

Investigation has shown that not more than 30 pounds of cooked pota-

tes can be profitably fed to the dairy cows, and a considerably smaller quantity of raw potatoes. If these quantities are exceeded, the butter acquires a very poor flavor, and the physical character is very salty. In the feeding of raw potatoes to dairy cows it has been found that there is probably not more than a value of 15 cents per bushel when compared with average corn silage.

Raw potatoes for hogs have very low feed value and should be used sparingly and only then as a source of succulence. However, when potatoes are properly cooked and fed with grain, such as cornmeal, ground barley or mixed grains, it has been found that from 500 to 650 pounds of cooked potatoes will replace 100 lbs. of grain. As a rule, it pays to feed the potatoes warm and as a fairly dry mash mixed with the grain.—E. S. A.

Sugar Beet Pulp

WE are within hauling distance of a beet sugar factory. What can I afford to pay for wet beet pulp when I have to haul it five miles? How should it be fed?—R. E. Kent Co., Ont.

Wet sugar beet pulp contains only 150 pounds of total digestible nutrients per ton as compared with bran, which is a standard food, and which contains about 1,218 pounds of total digestible nutrients per ton, which at present price, approximately \$35, would show a cost of about \$2.87 per hundredweight of digestible nutrients.

It would appear feasible to pay about 10¢ per ton for the wet sugar beet pulp; less the extra cost in hauling and handling as compared with the bran. The very high percentage of the moisture contained in wet beet pulp necessitates charging at least three times as much for hauling and handling as that of any of the dried meals or grains, such as wheat bran, about 10¢; practically the same process goes on as in the making and keeping of corn ensilage, and the quality of the beet pulp kept in this way is fully as good as the fresh pulp. It is usually advisable to feed this material mixed with dry grains, such as a mixture of bran, oats, oilcake or cottonseed.—E. S. A.

Ration for Fresh Cows

WE have several good cows fresh this month. They will feed 45 to 50 per cent. fat. We have dried brewers' grains, ground oats, corn ensilage, mangels and clover hay. Please suggest a ration for cows giving 25 to 45 lbs. of milk.—Jersey Man, Middlesex Co., Ont.

A good ration for a Jersey herd under considerations mentioned in this case, could consist of corn ensilage and mangels equal parts 40 to 50 pounds per day, or, if the quantity of mangels is limited make it 25 to 50 pounds of ensilage and 10 pounds of mangels per day, six to eight pounds of clover hay, and one pound of a meal mixture consisting of equal parts bran, brewers' grains, and ground oats, for every four pounds of milk produced. In the case of the heavy producing cows the rate of grain feeding might be 1-1/2 to 2 and with the cows well on in their lactation period, 1-5.—G.W.M.

A cow is not capable of large milk production unless she be of strong constitution. Small nostrils, narrow head and limited chest girth are indications of poor constitution.



Your Friction Tax How You Can Reduce It Permanently

Every motor operator must pay, when his machine is in motion, a friction tax. The burden of this expense is heavy or light, according to the owner's thoughtful care in selecting lubricants.

Even the most finely ground and polished surfaces are known to consist of thousands of minute projections. These metal-to-metal surfaces must be "cushioned" with a film of good lubricating oil.

But this film is not the only requirement to bring positive satisfaction and low friction tax. The lubricant must perform its function under extreme heat—often 1200 degrees—with a minimum carbonization.

Use En-ar-co National Motor Oil

The quality of En-ar-co Motor Oil has been proved by 34 years of scientific tests and actual performance in thousands of farm motors. Your automobile, tractor or gasoline engine will develop a more responsive, flexible power and last longer if you use this power saving lubricant. It successfully withstands extreme heat and cold, doing its work with the least possible carbonization. Thus your friction tax will be reduced to a minimum—your satisfaction increased to a maximum.

Try En-ar-co products now. Use En-ar-co National Motor Oil and White Rose Gasoline this winter. Test them under winter's most trying conditions. Then you'll be prepared to meet the coming season with a new and greater power.

There is a quick and certain way to know the right oil for you. Send us the name and model of your motor and tell us how long and under what conditions you have operated it. Our experts will give you valuable information free.

Send the coupon now for handy oil can and valuable lubrication and power facts.

Canadian Oil Companies, Limited

Branch Offices in 36 Cities

Dept. H3, 2-12 Strachan Avenue, Toronto, Canada

Know the Greater Satisfaction

of
En-ar-co

PETROLEUM PRODUCTS

For Winter Days and Nights



Keep Your Home Warm, Cozy and Bright

Don't subject yourself, family and friends to uncertain warmth and cheerless light any longer—use National Light Oil in your

Oil Stoves and Lamps

This "better" oil burns evenly and cleanly. No smoke, no smell, and every drop burns. No more dirty carbon residue or clogged burners in oil stoves. In your lamps it will impart a wonderful light. Clear, white rays replace the flickering yellow flame of "rust oil." And there's an end to clouded chimneys, charred wicks and poisonous fumes.

For Incubators and Brooders

These burners require pure oil. The heat must be uniform and continuous. Deadly fumes penetrate and clog egg shell pores and kill live chicks in the brooder. You cannot afford to take chances on low grade oil. To obtain the ideal heat—a chick from every hatchable egg—use National Light Oil.

Sent FREE To Auto and Tractor Owners

This long can with a long spout that enables you to reach the hard-to-reach parts "oil-right"

Sent FREE

Canadian Oil Companies, Limited, Dept. H-3, 2-12 Strachan Ave., Toronto, Ont.

Long..... automobile or tractor and inclose two 2-cent stamps. Send me Handy Oil Can FREE. Please give nearest shipping point in this province and quote prices on the items I have marked. I will be in the market about

1 use.....gals. gasoline per year. 1 use.....auto gas. per year.
1 use.....gals. motor oil per year. 1 use.....gals. kerosene per year.
1 use.....lb. auto grease per year. 1 use.....gals. tractor oil per year.

My Name is.....
Address.....
Province.....

Tear or Cut Out—Mail Today
Do not send unless you give make of your auto or tractor.



The Canadian Record of Performance Test

Is a Change in the Duration of the Test Period Desirable?

John McKee, Oxford County, Ont.

PROPOSE it may be said of the dairy cow that her "chief end in life" is to produce and reproduce. In framing the rules governing our R.O.P. test, the committee appointed by our Canadian Ayrshire Breeders' Association very wisely decided not to follow the example of our American cousins, and lose sight altogether of the importance of the reproduction of the species. Never in the history of the world has it been so vitally necessary that production and reproduction should both be pushed to the utmost possible limit, and the production of milk is the most important of all.

"No food has taken such an important part in the development and growth of mankind as milk," says Prof. O. Ert, of Ohio. "Sufficient evidence to prove this statement lies in the fact that the mortality of children under two years of age has exceeded 90 per cent. in all of the countries engaged in the present war, with the exception of England, which has been constantly supplied with condensed milk by the United States. Statistics gathered by the Red Cross show that in Serbia to-day the mortality of infants is so great that there are practically no children under the age of

two years. The future of our country depends upon the children of to-day, and no food can take the place of milk in the nourishment of the child. This is sufficient evidence that such an important industry as dairying should have immediate consideration. One of the large distributors of food products to the Allies in Rotterdam, Holland, states that no food has added more to the strength and endurance of the soldiers in the trenches than condensed milk."

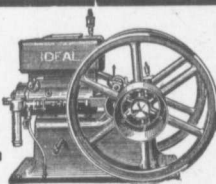
The Problem in Brief.

The question that naturally presents itself for solution now is: how best can the exigencies of the present unparalleled situation be coped with? Can there be any changes made in the rules that will help along the cause of increased production? It is quite

possible that rules and regulations which were perfectly satisfactory under normal conditions will not best serve our ends under conditions created by this awful war.

I am convinced that no work that has been undertaken by the Dominion Department of Agriculture, looking to the improvement of dairy cattle in Canada, can show such good results, for the money expended, as the supervision of our R.O.P. test work. The Canadian Ayrshire Breeders' Association led the way and blazed the trail for the other associations to follow in this yearly test work, and it may be "up to us" to once more lead the way and propose radical changes in the rules, if by so doing it will be the means of causing increased production in the dairy herds of Canada.

A Maximum OF SAFE SURE STEADY POWER



A Minimum of Trouble and Expense

TEN thousand farmers over Canada are proving the staying qualities and dependability of Brantford Engines. To-day the Brantford all-purpose engine gives you a great range of fuel. You are not tied to gasoline alone for this is one engine that runs just as smoothly on coal oil or naphtha as on gasoline. Secure an engine that will use these cheapest fuels—and one also that has earned its enviable reputation by honest work. Every Brantford engine is fully guaranteed. They are made for skids or mounted—our catalogue gives full details of them all.

Our Other Lines

Galvanized Steel Pumping Windmills, Steel Flag Stacks, Galvanized "New Ideal" Power Windmills, Batch Spraying Outfits, Batch Concrete Mixers, Galvanized Steel Wood and Pole Saws, Iron Pumps, Wood Tanks, Water Boxes, Brass Cylinders, etc., etc.

Tractors That Have Made Good

BRANTFORD tractors are far beyond the experimental stage of the many makes that now flood the market. They have been tested out for ten years under the severest and most varied of practical farm conditions. They have made good. The prospective buyer of a tractor should bear this in mind—that any machine of which so many uses are made, such as plowing, diskings, etc., hauling to market or heavy belt work, must be so constructed and of such quality materials that it will stand up season after season and give first-class service. We stand behind our tractors with the guarantee that they will give this service.

The Engine.—In the "Ideal" and "Ideal Junior," each engine has two opposed cylinders placed horizontally; pistons are operated by a two-throw crank-shaft in heavy bronze bearings half way between cylinders; this insures perfect balance and greatest power. Separate carburetors for both fuel and water on each cylinder, but one throttle governor regulates fuel supply for both. The carburetors are of our own special make to insure complete use of all kerosene fuel.



• **Power.**—The "Ideal" (20-16) has plenty of power to pull 5 plows or drive a 28-inch thrasher with all attachments. The "Ideal Junior" (24-12) will pull 2 plows or drive a 21-inch mill. Plow speed 8 1/2 miles.

• **THE "BEAVER"** is our latest 4-cylinder high tractor, developing 12 h.p. on the bar and 24 h.p. on the belt. Get full information from us before purchasing.



Our Brantford "Beaver," 24-12, 4-cylinder (light); "Ideal Junior," 24-12; and "Ideal," 30-15, Tractors, as seen at one of the recent plowing demonstrations in Ontario. They operate on kerosene, gasoline, naphtha, etc.

GOULD, SHAPLEY & MUIR CO., LIMITED Brantford, Ont.

Branches at Winnipeg, Regina, Calgary, Saskatoon

CATALOGUES COVERING ANY LINE CAN BE SECURED BY WRITING US.

Briefly stated, the principal arguments in favor of the present rules are as follows:

The Argument for 365 Days.

1. A 365-day test is now recognized as the standard by all our dairy breed associations. For one association to institute a 300-day test would mean that members of that association would be always on the defence explaining it. The ordinary dairy farmer would not distinguish between them.
2. Our records will compare more favorably with American records.
3. A two-year-old heifer can be milked a full year in order to fix the habit of a long milking period on her.
4. Any breeder is at liberty to conduct a 10 months' test now.
5. Records made for a shorter term would not compare favorably with former 365-day records.

A 300-Day Test.

The arguments which strike me as being the principal ones in favor of making a change to a 300-day basis are as follows:

1. A 300-day milking period will allow a cow to produce a calf every 13 or 13 months, as nature intended, and cows will be more likely to remain regular breeders and profitable cows until they reach a ripe old age.
2. It would put the average breeder more nearly on a par with the big and wealthy breeders, and would undoubtedly result in a great increase in entries in our R.O.P. work.
3. Taken in the aggregate throughout Canada, if adopted by all our dairy breed associations, there would be a great increase in the amount of milk produced and number of calves dropped during the next five or six years.
4. There would be much greater uniformity as regards length of time the qualified cows and heifers will have been milked to make their records.
5. It will place our exhibitors and winter fair dairy test cows, which have to freshen regularly every year, on a more even footing with other stock that can now remain in their own stables and be tested for 365 days, and thereby make much superior records, although they may be of very inferior individuality.

Urgent Necessity for Production.
While there is much to be said in favor of the rules as they stand at present, it does seem to me that in view of the food famine staring the world in the face to-day, as a result of this bloody carnage in Europe, these points pale into insignificance in comparison with the urgent necessity for increased production of dairy products. This is a matter to which I have given a great deal of thought during the past few months, and the conclusion I have reached is that we should adopt a 300-day test and a time limit of 400 days in calving. I would favor letting the standard for milk and fat remain as at present. An Arrshire cow that cannot produce 8,500 lbs. of milk in 300 days has no business aspiring to a place of honor in our Record of Performance. I am strongly of the opinion that if our association will make the break and adopt the 300-day test the rest will follow suit. There is undoubtedly a strong current of opinion among our members setting in in favor of shortening the test to 300 days. In the United States, where the rules do not make it compulsory to breed the cow during a year's test, we have already seen some of the world's champions rendered useless for breeding purposes, after being subjected to a year's high pressure feeding and milking three and four times per day. Many of our wealthy breeders consider that it pays them to sacrifice a

few cows in that way on account of the prestige they acquire through having world's champion records in their herds. In Canada, thanks to our 15 months' time limit, we have never experienced as much trouble in this respect, but already we have seen some cases where a cow's powers of reproduction have been very seriously impaired by a year or two of high pressure test work.

I have written somewhat more fully than I intended at the outset, with the hope that it will cause our pure-bred dairy cattle breeders to also give some thought to this subject between now and another meeting time, in the hope that then there will be a practical unanimity of opinion among our breeders with regard to changes in our R.O.P. rules, which will lead to increased production and reproduction in the dairy herds of Canada.

The 300 or the 365 Day Test

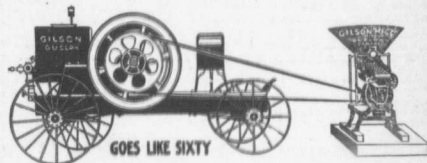
SC. G. M., Glengarry Co., Ont.
HALL, we continue the 365 day test or shall we reduce it to 300 days? Which system is in the best interests of the dairy stock of Canada? Regarding this question, we find our breeders divided into two camps, first those who place the emphasis upon the record made, regardless of sacrifices before and after, and then those who claim that a record to be of real lasting value to the breed it represents must be made on a sound commercial basis. It is a well known fact that a dairy cow, to make the best use of her life, in the work for which she is intended, namely, the production of milk and the reproduction of her kind, must freshen approximately once in twelve months. If she falls in this, the wide-awake dairyman realizes that she is losing him money, and if that cow were not registered, the chances are she would soon be her life on the block. Why should a system which leads to the block an otherwise good grade cow, be the means of leading her pure bred sister to heights of fame which she could not reach by any other method. That is the question in a nutshell. We must all admit that greater yearly records can be made by having 15 months between freshening than with only twelve, but is the advantage gained a real one? The successful future of registered dairy stock is dependent upon a firm, practical, economic footing. Any system which upsets the economic and market balance of the production of milk is not a safe basis upon which to build. The production and marketing of milk and milk products is the backbone of all dairy enterprises, and any system which ignores this balance must in the end be detrimental to the registered dairy stock industry.

It is a fact that many successful breeders of pure bred stock are now conducting their R. O. P. work upon the 300 day basis rather than disarrange their yearly breeding and marketing schedule.

Personally, I am greatly interested in the work being done by Mr. Leitch of the Ontario Agricultural College with the dairy herd there. I believe Mr. Leitch is approaching the question from the proper angle. He is placing the emphasis where it properly belongs, i.e., upon economic, profitable production, and is making his records conform to that standard. I believe the time is coming when we will all pay more attention to that side of the question. I believe that in no way can we better prepare for this condition than by adopting the 300-day test.

The 300-day test would also simplify matters for those who count on entering their best stock in the show ring. They could have them freshen about the same time each year and still have them in line for R.O.P. work.

THIS GRINDING OUTFIT WILL COST YOU NOTHING



Do your own grinding at your own convenience—be independent. Get a Gilson Grinding Outfit on our new, easy payment plan, and it will pay for itself.

Did it ever occur to you that all the time you are doing without a Gilson Engine—and getting your work done in a more expensive way—you are paying for the engine, but not getting it? Gilson Engines Dominate in Quality and Service—start without cranking—are absolutely guaranteed.

WRITE US TO-DAY FOR CATALOG—and be sure and specify what size of engine you are interested in.

GILSON MFG. CO. Ltd. 497 York St. Guelph, Can.

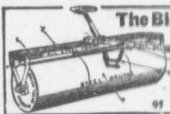
THE WONDERFUL GILSON

THE HYLO
A superior
Silo for
the discriminating
buyer



The Light Running
Blower Cutter made

SEND FOR SPECIAL CATALOGS



The Bissell Steel Roller has a rigid steel frame—no wood whatever.

Large roller bearings and strong 2" axles insure durability and great strength. The Bissell is a 3-drum Roller of good weight, built to stand hard usage and give great service. Write Dept. R. for catalogue.

T. E. BISSELL CO., LTD., Elora, Ont.

(See Advertisement also on page 14.)

We want, and will pay highest prices for all kinds of RAW

FURS

Ship your skins to us at once.
We pay Express Charges, or Postage.

Price list and shipping tags sent on request.

Reyillon Frères
Established 1793
Largest Fur Manufacturers in the World

134 McGill St.,
MONTREAL,
P.Q. 3

Farm and Dairy stands foursquare against everything that is detrimental to the farmers' interests, and whatever appears in its columns, either advertising or editorial, is guaranteed reliable.

A Real Oil Engine

Uses no Gasoline—not even to start with. Starts easily in COLD WEATHER on the fuel it runs on—coal oil or fuel oil, and only uses half the usual amount—hence saving on fuel alone will pay for the engine in a short time.

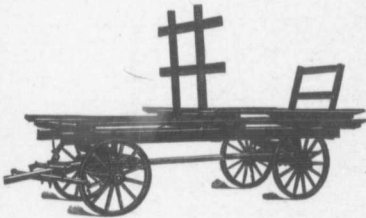
THE HOAG OIL ENGINE

is new in principle—no electrical devices whatever used. The saving in time and trouble forever fixing electrical ignition is a big item. GET AWAY FROM IT.

Give us an idea of the size you are interested in and we will send circulars.

HENRY P. HOAG & CO., BRANTFORD, ONT.

Makes Hay the Magic Way



Above is a cut of a Hay Rack which will revolutionize hay making methods. With it a boy can do the work of two men and do it easier and quicker. In loading from the Hay Loader, hay is first built to the full height of load on the movable half rack. This is then run to the front of the rack and the remaining half built on the bed rack. One person can thus put on the full load by merely tramping the hay, because the builder has always a ladder, or hay, in front and rear, to build by. THE COMPLETE DIVISION in centre saves time and trouble when unloading with the hay fork.

This rack saves one man in haying, saves tons of hay from spoiling, and permits the farmer to spend valuable time on other work. The labor situation is critical and is bound to become worse. You, Mr. Farmer, owe it to yourself and your country to use this great LABOR SAVER next season. Order now and be sure of delivery. Send post card for full descriptive matter and prices.

The Magic Rack Co., Woodburn, Ont.

AGENTS WANTED EVERYWHERE.

STOP YOUR
FIRE LOSS

**“METALLIC”
BUILDINGS ARE SAFE**

WHY build with inflammable wood when you can get fire-proof, weather-proof and lightning proof “Metallic” building materials. They are far cheaper in the end. “Empire” Corrugated Iron Siding is easily and quickly laid and makes a strong, rigid wall. Its light weight makes heavy construction unnecessary.

“Eastlake” Galvanized Shingles, a perfect roof. “Haltus” Ventilators and “Acheson” Roof Lights make a perfect roof. “Metallic” building materials defy the elements. “Eastlake” roofs laid over thirty years ago are good today.

“Metallic built” means fireproof, stormproof, neat and durable construction.

Before buying any building materials write us for booklet and complete information. We can save you money.

Metallic Roofing Co., Limited

Toronto and Winnipeg

The Future of the Horse Breeding Industry

(Continued from page 6.)

the big farmer as well as the small one has found that in the cultivation of growing crops, the short haul work where turns are close and wheeling conditions are difficult, that only the horse can work to advantage. In fact so far as it is now possible, to see there is all the work that the horse, in the tractor and the motor truck can do.

Opinions of Authorities.

“At present the tractor and motor truck are having some effect on the demand for horses, says Prof. H. Barton of the Animal Husbandry Department, Macdonald College, but these I am inclined to believe will ultimately prove supplements rather than substitutes for horse power.” Walter Harland Smith, manager of the Horse Department, Union Stock Yards, Toronto, has this to say, “No matter how many tractors, motor trucks, or motor cars are built, the draft horse will be needed.”

The opinion of Dr. J. G. Rutherford of the Resources Commission of the Canadian Pacific Railway is similar. Dr. Rutherford says:

“I have had interviews with representatives of all the large cartage companies in our cities, and they say that, so far as they have gone in trying out the motor trucks, they have found the horse much more satisfactory and economical. Whether the development of the motor truck, which, until comparatively recent years, did not receive as much attention as that of the passenger car, will be taken up with energy enough to make it sufficiently economical to supersede the horse, I cannot say. The heavy farm tractor is a thing of the past. The light farm tractor has come to stay. So far as the horse business is concerned, a man can continue to breed heavy horses without any risk of market falls for at least 10 or fifteen years to come.”

A large transfer company in Chicago, makes an extensive experiment with trucks, only to return to the horse as the best money maker for certain classes of work. The manager of this concern says that, according to his experience the cost of stopping and starting a truck equals the expense of driving it two blocks, and as his average haul is very short the horse is the cheaper power. Therefore this company is now taking on several hundred new horses.

Future Horse Markets.

“All reports and rumors from Chicago,” says a large Chicago dealer who has bought horses for the allies, “indicate that Germany is suffering a most acute horse famine and that she will be sucked dry of horses by the time the war is over. There is only one answer to such a condition: When peace comes Germany must replenish her exhausted stock of horses, and America is evidently the only source from which she can draw a large supply. The kind of horse that Germany will demand must be a big consideration. My conviction is that she will insist upon a heavier horse than we have been sending to the front, an animal weighing not less than 1400 pounds and up to a ton. The Belgian horse is gone so far as Belgium is concerned. The stables of Belgian stallions and brood mares are now in the United States. The breeding stock of the French horse has undoubtedly suffered to some extent from the war, but good authorities tell me that many of these splendid animals were early removed to a place of safety in districts where they were little disturbed.”

United States horse dealers are ex-

pecting a large demand for horses from the Southern States. The high prices which have been realized on ootton since the beginning of the war has filled this country with money. The taste of big money which the southern farmers have got makes them want more of it, and in order to get this they must crop of their land and cultivate their crops of cotton and sugar more thoroughly. Because they have money they are out to buy, and horse dealers in the northern States are looking to the south as a horse market for years to come.

South America will not likely ever become a worth while market for our horses. Such is the opinion of a Toronto horse expert, who has returned from the Argentine. He says: “The natural market for our surplus horses the fields, as a rule, are small and irregular. The demand from that quarter will undoubtedly be for a thick-bodied, hard-legged, sound-footed horse of good weight. As I see it, such an animal will have the choice of that market. I can see no escape from the conclusion that there will be a demand in Europe for all the animals of that type which we can spare.”

The Type to Breed.

All authorities on horse breeding agree that it is good business to breed the heavier type of horse. They are just as unanimous in discouraging the breeding of light horses.

W. H. Smith of the Toronto Stock Yards in a recent letter to Farm and Dairy, gives his opinion on the horse situation. Mr. Smith has been in close connection with the horse industry for 35 years. He says:

“I cannot advise anyone to breed light drivers or small saddle horses unless they expect to keep them for their own use. Breeders have small brood mares, which they may have been breeding to Standard-breds, Thoroughbreds, or Hackneys, if they cannot dispose of such small mares, should breed them to Percheron or good quality Clyde sires. They will then be getting good, blocky horses which are useful to farmers, and easy to sell compared with drivers.”

“Men who are breeding blocky, farm horses from 1300 to 1750 pounds will always find a splendid market for them. The requirements in Canada alone for industrial and agricultural development will require more good heavy horses than we are able to produce. In addition it is expected that after the war conditions will require immense numbers of horses for export to countries which have been prevented from breeding during the war and have lost their entire establishments. It is to be hoped that horse breeders will persevere and allow no one to persuade them to discontinue the breeding of good blocky horses. Even little chunks, 1150 pounds, will be saleable, and up to 1700 or 1800 pounds. Short less for their weight should be aimed at.”

“It would seem reasonable to suppose,” says Prof. Barton in a letter to Farm and Dairy, “that there might be some European demand for horses after the war. The horse population of this country and the United States is high at the present time and outside the war period the demand has not been great because of industrial inactivity. I imagine this condition of affairs may prevail to some extent immediately after the war and probably the horse supply will be fairly plentiful, particularly of the horse more or less nondescript. I am

strongly of the opinion, however, that for the horse of considerable weight and quality there will be a market at a paying price. "The breeding of nondescripts should be discouraged. Any encouragement given to horse

breeding should be strictly qualified to include only the right kind. I would not hesitate to encourage any farmer making a place on his farm for the right brood mare, provided he has access to a good stallion.—S.R.N.H.

Strange to say, in spite of her terrible suffering her milk did not leave her, and after a few weeks she was milked regularly. She milked in all for a year and eleven months, and of that seven months were lived in the hammock.

tell you about our silo. It is a beautiful silo, the only one ever seen in this part of China, but alas! it doesn't silate."

Dairying in China with "Clover Pel."

The Experience of a Presbyterian Minister with His Ayrshire Cow

DR. JAS. R. MENZIES, medical missionary of the Presbyterian Church in Honan, China, when on furlough in Canada recently promised one of the editors of Farm and Dairy, with whom he is acquainted, that he would write us, on his return to China, of his experiences as a dairyman in that far-off country. True to his word, Dr. Menzies has sent us an account of his experiences to date. He writes:

"We arrived in Hwaking, our old home in China, a few days ago from furlough, and one of the first things I saw was the Farm and Dairy waiting for me. It is real good to be back again in Old China, better than you can think.

"We had a time of it getting up from Hankow, as the railroad was broken in several places, and will be broken in several places for some months they say. Think of it! After eight or nine months of drought that spoilt the winter wheat crop the rains came, and when they came several things went, particularly the Chin Han Railway that parallels the mountains for several hundred miles.

"Villages and even cities were badly damaged, and the crops, alas, so sorely needed, are washed out or covered with mud.

"The Farm and Dairy reminds me of a promise given to write something about our dairy farm in China! After living and bringing up our children on tinned milk the thought came to us that it would be a nice thing to have a real cow and drink real milk. Some of our neighbors rejoiced in the possession of some goats that gave milk of a goaty flavor and of an uncertain quantity, but we decided to go in for the real thing, and bought from another missionary a fine Ayrshire bull, Buttercup Lad, as the progenitor of what was to be a great herd of grade Ayrshire cattle in this interesting part of China. Buttercup Lad is all right, but the Ayrshire herd is still non-existent. There are cows here, but they are almost entirely unperfected, over-worked, unambitious, broken-spirited lot, and after years I have not yet secured a single good half-bred heifer, and have given up hoping. Cows here are worked on the farms and the roads like oxen, and their lot is usually a hard one.

Clover Pel.

"A little later we purchased an Ayrshire cow, Clover Pel, and of her we are proud. Like the Irish, the rinderpest is always with us in China, and our small herd did not escape. A few months after it visited us it swept off all but five of a herd of 52 fine animals not very far from us in Honan. Many of these animals had been imported from America. It seemed to cover all China from Manchuria to Canton, and was very fatal.

"One day in October Clover Pel fell down with the disease. Her agony as she roled on the ground was pitiful to see. Several times I was on the point of ending her suffering (but she had cost over \$300, and that means a lot of money to a missionary,) but after a time, with large doses of salts and castileum, we got her pain relieved, but she was paralyzed and could not get up.

"I knew cows do not do well in a thing as a rule, but I have an ex-

Mohammedan evangelist here who knows a good deal about cattle, and with his help we built a shack over the patient where she lay, drove four crocheted stakes into the ground with poles laid on top, and from these poles suspended her in sort of hammock with breast strap and breeching to keep her from falling forward or backward. She was unable to put a single foot to the ground, and her legs were absolutely powerless. Every week we let her down on the ground to rest for a few hours, then hoisted her up again.

Sick But Still Working.

"She soon became used to her hammock and slept in it like a child.

After some months her terrible bed-sores healed, and she was able to put one foot, then two hind feet to the ground. Gradually she gained strength and was able to stand for a few minutes but could not walk. You may guess there was great excitement in the yard when the old coolie came running in to announce that she could walk a few steps. Poor brute, she was so proud of it herself she tried to run and took a header. She was able to get up alone now, though for weeks we had to assist her in rising, but for some time she was not able to lie down. Well, she is perfectly well now, and has had since then a fine calf, and only the scars of the bed-sores where the Chinese crows constantly tried to eat her, remain, to remind us of her prolonged sickness.

"That is all about Clover Pel just now. When I write again I want to

Protect the Machinery

WORD is being sent out to farmers over the country to take special pains this fall and winter to protect their machines. Prices have advanced greatly, and care of farm machinery will pay doubly well this year. So the word is going out:

To put machines under cover as soon as the season's work with them is over.

To go over every machine carefully as soon as opportunity will permit. Tightening bolts, replacing broken parts, and oiling carefully to prevent rusting.

To paint machines, as painting lengthens the life of a machine. Bridge paint is suggested as the best for iron parts.

The basis of successful and profitable cattle feeding is the growing of high quality roughage in sufficient quantity on the farm.



The Biggest thing on the farm

THINK MAN, what you miss when your farm lacks the telephone!

- ¶ You miss up-to-the-minute market reports that your competitors in the next township get every day. That costs you money—real money time and again, when shrewd men who know the market take advantage of your isolation.
- ¶ You miss the *ease* of being able to telephone for supplies. Instead you must take a horse and man from work to go on errands. Think how often that has cost you half a day for man and beast. The telephone would save you that loss.
- ¶ You miss the *safety* of being able to telephone for help in case of fire—for the doctor in case of illness. Sometimes every day the telephone saves property and life—farmers who have it call the telephone "the shining little friend of humanity."
- ¶ You miss the *sociability* that only the telephone can bring into a community—its sociability that keeps your wife from heart-breaking loneliness and your children from the "city fever."
- ¶ You miss all this, that nearly 125,000 families on farms in Canada have found they cannot do without.

CAN YOU AFFORD TO BE WITHOUT THE TELEPHONE?

- ¶ Not when you consider that you can make it earn it's low annual cost nearly every month in money saved and satisfaction gained—not when you realize the pleasure and convenience it will bring you—the safety and loneliness it will remove from your life!

¶ Why, listen friend, talks who have the telephone say

"IT'S THE BIGGEST LITTLE THING ON THE FARM!"

¶ Hundreds of Farmers who have telephones in their own homes have helped us to prepare a new booklet entitled "How the Telephone Helps the Farmer." Needless to say, it is one of the most interesting booklets ever published on this subject. If you are without a telephone, you should have a copy by all means. *Ask for it, we'll obligate you in any way, we write today.*

WE SUPPLY courtesies & Telephone Company made from the organization of a Company to the complete plant—materials and labor as well as the telephone material and pole. Our business is the telephone business and nothing else.

Northern Electric Company
LIMITED

MONTREAL OTTAWA WINNIPEG CALGARY
HALIFAX TORONTO REGINA EDMONTON

CUT OUT THIS COUPON

Sign and mail to-day

Northern Electric Company
LIMITED
(Address nearest branch)

Please send me your FREE BOOK on "HOW THE TELEPHONE HELPS THE FARMER"
(More than 125,000 Farmers helped us to compile this wonderful new book, it's yours free for asking.)

Name _____
Town _____
Province _____



F. & D. 704

SAID Farmer Hodge to his neighbor Dodge,
 Who was whistling "Tipperary,"
 "The mail last night brought before my sight
 A bargain in Farm and Dairy.

"While the tax on dogs and the price of hogs
 Alike keep soaring skyward,
 And the dollar wanes, and the tariff gains,
 And the Food Control's a by-word.

"There is still one spot where the price has not
 Taken wing for the heights more nifty,
 For it now appears that you get two years'
 Farm and Dairy for a dollar fifty."



No Wonder Mr. Hodge Was Pleased!

He had just read the announcement in last week's Farm and Dairy that he could renew his subscription for 24 months for only \$1.50, or 36 months for only \$2.00.

This is our annual December bargain offer whereby we accept subscriptions—new or renewal—for two full years for only one-fifty, or three full years for only two dollars.

If you have never taken Farm and Dairy, this is your chance to get it cheap. If you are already getting it, send in \$1.50 or \$2.00 now and your subscription will be extended for two years or three years or more from whatever date it is due to expire.

This is our Special Christmas offer, good during December only.

SOLVING THE XMAS GIFT PROBLEM

Send Farm and Dairy to your friend. It is a welcome Christmas gift that repeats every week throughout the year.

Milking Machines for Dairy Cattle Breeders

(Continued from page 8.)

ports have made us wary of risking a few hundred dollars in a milking machine.

Before the day was over we had spoken to several men, owners of pure-bred dairy cattle, who were hesitating about solving their labor problem with a milking machine, and all of them because of the adverse experiences of neighbors. Further enquiry, however, usually revealed the fact that in cases where the machines had been thrown out, the care and operation of the machine was usually everybody's business and therefore nobody's business, and in many cases the only trouble had been that condenseries had "kicked" on the quality of the milk.

Official Evidence.

When a question is deputed in Canada, our first inclination is to ask for the opinions of the agricultural experts, as we are pleased to call them. There is abundance of such evidence on the milking machine. Last spring one of our editors visited Macdonald College and found them milking their pure-bred Ayrshire and Holstein herds with a mechanical milker and were very well pleased with the results. Several makes of machines have been thoroughly tested at Ottawa and have given uniformly good service. A milking machine, we understand, is now being used with good results at Guelph. To get still further information as to the satisfaction or lack of it that mechanical milkers are giving in pure-bred herds, Farm and Dairy writes to a dozen or more breeders whom we knew had installed the machine from one to four years earlier. All replied and without a single exception their testimony was favorable to mechanical milking. We have room here to pub-

lish only a few of the letters received.

A Carleton County Experience.

Mr. S. A. Caldwell, of Carleton Co., Ont., whose specialty is pure-bred Holstein cattle, writes us as follows: "We have been using our machine since March, and find it does the work perfectly. There is nothing more we could desire and as for its ease of operation, well, that is one of its best points. It is also very easy to clean and keep clean. We installed our machine ourselves and didn't have a representative of the company to see us for over three months, and we didn't need him then, but he was putting in another machine near us and called to see how we were getting along.

"A smart boy 12 years old can run the milking machine. It has had no bad effect on the cows; in fact, they seem to like it better than hand milking, and we have had no milk spilled since we commenced using it. We have had no repairs, yet and the only expense has been for gasoline, and it doesn't require much of that, as we use a one and one-half h.p. engine. We have several very good cows, which were hard to milk and had short tests. We intended to get rid of them, but now with the milking machine, they don't give us any trouble. In the busy time, or if some of us are away, one man can milk our 20 cows quite easily, which means quite a saving of help."

From Western Ontario.

Mr. E. A. Turner breeds Ayrshires in Perth Co., Ont. He writes us of his experience as follows:

"You ask for my candid impression of the milking machine for the dairy cattle breeder. I can honestly say that the longer we use the machine, the

better we like it. We strip after it. There is a good half of the cows, however, from which we get no more strippings than if we followed hand milkers a few minutes after the cows were milked. The machine is easily operated. I had a student from the city helping me this summer. The second day he took charge of the machine and milked the cows for the four months he was with me. We have had no trouble, except for an occasional renewal of the rubber caps on the teat cups.

"You ask how it has solved our milking problem. We have 150 acres of land. Father is 73 and we have been alone, except for the four months of this summer. We keep from 14 to 16 milking cows. Our Saturday evening milk goes to the factory Monday morning and we have never lost a can of milk since we put in the machine."

A. D. Foster's Opinion.

A. D. Foster and Sons, of Bloomfield, Ont., are sufficiently well known to give weight to their opinion on any subject connected with dairy farming. Recently, Mr. Foster wrote Farm and Dairy re his milking machine experience. He says:

"We installed a two-unit milker in November, 1915, and in the spring of 1916 we added another unit, making three units on a row of 17 cows. We have used our machine ever since, as we usually have cows freshening in every month of the year. We are well satisfied with this work. It has had no ill effect in any way on the cows. We find that young cows and heifers require the least stripping. One man can run three units and carry his milk to the milk room. We have had no trouble with the milker in any way. This is our second year and the cost of upkeep will be about six dollars, which is reasonable. One man can milk the 17 cows in an hour when in

the heavy flow of the season. We expect in the near future to install two more units on a row of 17 heifers with their first calf and will add another unit later on. We ship strictly sweet cream to the city of Belleville and have no reports of taint or ill flavors."

If a census could be taken of the opinions of all milking machine users who are also breeders of pure-bred cattle, we feel confident that the majority vote would be in favor of the milking machine. It is well to remember, however, that the milking operation is one of the most delicate and difficult to which machinery has been applied on the farm, and to expect good results without careful handling, is not logical. The new grain binder is never trusted with a greenhorn, and it is even more important that the best man on the farm will be given charge of the milking machine. The evidence on hand is sufficient to justify every dairy cattle breeder with a considerable number of cows to give machine milking a trial. —F. E. E.

The Limit in Quick Settlement.

Two insurance agents—a Yankee and an Englishman—were bragging about their rival methods. The Britisher was holding forth on the system of prompt payment carried out by his people—no trouble, no fuss, no attempt to wriggle out of settlement. "If the man died to-night," he continued, "his widow would receive her money by the first post to-morrow morning."

"You don't say?" growled the Yankee. "See here, now, you talk of prompt payment! Waal, our office is on the third floor of a building forty-nine stories high. One of our clients lived in that forty-ninth story, and he fell out of the window. We handed him his check as he passed."

TORONTO SILOS

The New Hip Roof Adds Tons to the Capacity

The old style silo roof wasted at least four or five feet of space at the top because a man could not stand to tramp down the silage. This space saved by our new Hip-Roof makes a great difference to your stock of green feed before the winter is out. That is one reason why you should select the TORONTO.

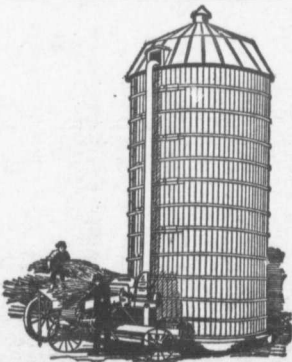
Air-Tight - - Thoroughly Substantial

Our new construction absolutely excludes air and delivers the ensilage juicy, green and in the most nutritious condition for your cattle. All wood stock is DOUBLE tongued-and-grooved, and fits perfectly, with steel splines to join ends.

Then, a good investment demands years of service. The No. 1 spruce we use, thoroughly soaked with pine tar and creosote, means that the Toronto Silo will outlive silos costing far more for material and construction.

Write for Booklet "Toronto Ensilage Equipment."
Prepare for next season and place your order early.

To Our Farmer Friends We Wish
"A MERRY CHRISTMAS
and a
PROSPEROUS NEW YEAR"



ONTARIO WIND ENGINE & PUMP CO., Limited
- ATLANTIC AVENUE - - TORONTO

Better - Cheaper POWER



A Page Farm Engine Light- ens the Labors of the Farm- er's Wife.

A PAGE FARM ENGINE beats hired help. It will perform all the drudgery that usually falls to the farmer's wife without a single complaint.

It will run the churn, the separator, the sewing machine and the washing machine. Operating a water system, a Page Engine will provide water for washing milk pans and provide city conveniences.

And all these need not interfere seriously with its regular farm duties.

Any woman can run a Page Farm Engine, so simply constructed in its little adjusting.

Two styles—one burning gasoline, and one that burns both kerosene and gasoline. There are five sizes of gasoline engine—the smallest $1\frac{1}{2}$ h.p., the largest 7 h.p.

And our direct-to-the-farmer selling plan permits us to offer these engines at an extremely low price. Write for full particulars.

THE PAGE WIRE FENCE COMPANY
LIMITED
WALKERVILLE, ONTARIO.



YOU Are Losing Real Money

on every hen that is not laying regularly. Why not turn your lazy birds into lively profit-payers?

**Pratts' POULTRY
REGULATOR**
produces a marked improvement in the birds because it acts directly on the digestive and egg-producing organs. Tones up the system. Puts

new life and vitality into your flock. Insures vigorous health and keeps disease away.

Your dealer has it in popular-priced pkgs., also in money-saving 25-lb. pails and 100-lb. bags.

Money Back If Not Satisfied

Pratts' Roup Remedy

is a sure preventive and cure for Colds and Roup. Powder or Tablet form.

Write for Pratts' 64-page book, "Poultry Wrinkles." It's FREE.

PRATT FOOD CO. of CAN., Ltd.
68 M. Clair. mt. St., Toronto.



HAS 1917 BROUGHT SUCCESS?

Now that the year is drawing to a close have you figured out the profits of your farm? **ARE YOU SATISFIED?**

If you feel that you should be doing better—should be getting bigger returns for all your work—why not consider the possibilities of Western Canada?

Write for any or all of our free booklets, "Homeseekers & Settlers Guide," "Peace River Guide," and "British Columbia Settlers Guide," to General Passenger Dept., Montreal, Que., or Toronto, Ont.

CANADIAN NORTHERN RAILWAY

POULTRY

Crate Fattening Profitable

THE use of crates for the finishing of poultry for the market has been general for years, and yet this year, with the high cost of feed, much of the stock is being killed in a very thin condition. Numerous tests have shown that feeding in a crate or coop for 15 days before killing produces a high quality and an economic flesh, and even this year this practice of finishing will pay. At the same time there are rationists who will produce flesh more cheaply than others, and for feeding this year it is more important than ever to make the most out of the feeds used. Therefore a further test made by the Experimental Farm will be of interest. For flesh the ration should be high in fattening material, and because of the tendency on the part of some to use for crate feeding a ration high in protein, a trial was suggested between narrow rations (rich in protein) and wide rations (rich in fat).

The object of the experiment, therefore, was to determine the relative value of a series of rations ranging from an extremely "wide" nutritive ratio to one correspondingly "narrow." For this experiment sixty vigorous cockerels were selected and placed in five crates. They were fed rations ranging in nutritive ratio 1:7.1 to 1:3.2.

The Rations Fed.

The rations fed and their nutritive ratio were as follows:

No. 1.—6 parts milk, 1 part ground oats, 1 part corn meal, 1 part buckwheat, 1.3 part tallow; ratio, 1:5.6.

No. 2.—6 parts milk, 1 part ground oats, 1 part corn meal, 1 part buckwheat meal; ratio, 1:5.09.

No. 3.—4 parts milk, 1 part F. flour, 1 part bran; ratio, 1:3.2.

No. 4.—4 parts milk, 1 part ground oats, 1 part shorts; ratio, 1:4.1.

No. 5.—6 parts milk, 1 part ground oats, 1 part corn meal, 1 part buckwheat meal; ratio, 1:5.09.

An attempt was made to increase the tallow to one-half part and widen the ratio to 1:7.1, but this resulted evidently in an unpalatable and heavier feed than the birds could assimilate. The amount fed was doubtless the limit of pure fat material that could be supplied in a ration and give any likelihood of beneficial results. Without skimmed milk it would be difficult to widen the ration by the addition of feed rich in carbohydrates, but such a ration would lead to trouble, as the lack of animal matter always induces feather pulling and like vices.

Beet Pulp Not Profitable.

A small quantity of "beet pulp" was fed to the birds in crate No. 5 to decrease feed. The result, however, was not encouraging. It was apparently unpalatable, and the birds consumed so little that no advantage could be shown for the feeding.

At the conclusion of the 21 days all the birds were in first-class condition and could have easily been made to show better gains in weight by continuing the feed. But three weeks is usually conceded to be as long a period as is profitable, and therefore this was the time decided upon.

In giving the results for the different rations it should be borne in mind that the duration of the experiment was 21 days, and that on the market the birds before the feeding were worth 15c per pound, and after being finished they brought 25c per pound. The costs are worked out at price of grain at the time, but the number of

pounds of feed required to produce one pound of gain are in each case given so the cost at present local prices may be worked out. The net profits of \$5.60 to \$9.25.

Ration No. 1.—Gained 23 lbs., consumed 70 lbs. feed; required 3.4 lbs. feed to 1 lb. gain. The cost of each pound of gain was 12.5c. The net profit for the 13 birds was \$6.49.

Ration No. 2.—Gained 32 lbs., consumed 80 lbs. feed; 2.5 lbs. feed to 1 lb. gain at a cost of 8.2c; net profit was \$9.25.

Ration No. 3.—Gained 16 lbs., consumed 67 lbs.; number of pounds fed for 1 lb. gain, 4.2, at a cost of 9.4c; net profit, \$6.60.

Ration No. 4.—Gained 19.5 lbs.; 73 lbs. eaten; 3.7 lbs. feed to 1 lb. gain; cost per pound gain, 8.7c; net profit, \$6.74.

Ration No. 5.—Gained 26.5 lbs.; 80 lbs. feed consumed; 3 lbs. feed to 1 lb. gain; cost per pound gain, 6.7c; net gain on crate, \$8.52.

It Pays to Finish.

The wide rations without tallow were most profitable, the narrow most expensive. It did not pay to add tallow at 13 cents per pound to the ration.

The extra finish usually looked for on tallow-fed birds was not apparent on crate No. 1 when dressed.

At the prices ruling during the experiment, such feeds as bran and flour are not satisfactory if fed alone, though often recommended for crate feeding.

Apparently the wider the nutritive ratio of the grains in the mixture the better. There seems no likelihood of getting it too wide if milk is used.

Should milk not be used with a wide ration there is a probability that feather plucking and other vices might become prevalent.

The advisability of "finishing" poultry before marketing is apparent, and where skimmed milk is available it can be put to no better use than to fatten what fowl there are available before killing, as it is to be seen from the above table that almost any ration will improve the bird in the fattening crate, but the wide ration is preferable, if the necessary ingredients are obtainable.

The usual methods and crates were adopted as described in Dominion Experimental Farms Bulletin No. 88.

A Chat with Lewis N. Clarke

A UNITED STATES journalist, a poultry expert by the way, recently spent several weeks visiting the big commercial poultry plants of his country. Then he published the results of his investigations, the chief conclusion of which was that the commercial poultryman factors in the cost of feed and labor are out of all proportion to the price of eggs and poultry. This sounded serious. A few days after reading the report of my friend across the line, I decided to stop over between trains and have a chat with Canada's biggest egg farmer, Mr. Lewis N. Clarke, and see what he thought of the situation. "Is the commercial poultry plant doomed?" I asked Mr. Clarke, as soon as I arrived at the farm.

"Absolutely not," declared Mr. Clarke, emphatically. "With the present price of eggs there is as much money in the business as ever before."

"But has the price of eggs advanced proportionately with the price of feed?"

Mr. Clarke considered for a minute, period as is profitable, and therefore this was the time decided upon. In giving the results for the different rations it should be borne in mind that the duration of the experiment was 21 days, and that on the market the birds before the feeding were worth 15c per pound, and after being finished they brought 25c per pound. The costs are worked out at price of grain at the time, but the number of

At present price of eggs there is as much money in the business as ever before. "But has the price of eggs advanced proportionately with the price of feed?"

Mr. Clarke considered for a minute, period as is profitable, and therefore this was the time decided upon. In giving the results for the different rations it should be borne in mind that the duration of the experiment was 21 days, and that on the market the birds before the feeding were worth 15c per pound, and after being finished they brought 25c per pound. The costs are worked out at price of grain at the time, but the number of

Or better, as we are discussing my own particular case, take our own average of 116 eggs. Subtract the 115 eggs required for running expenses and feed and this leaves 58 eggs, which, turned over to the profit account at 48 cents a dozen, is equal to \$2.82. Before this we would have had 68 eggs for profit at, say, 35 cents a dozen, or \$2.04 per hen."

Mr. Clarke admitted that his average production was greater now than it had been before the war, which might further account for his optimistic view of the present situation. "The feed situation is such, however," said he, "that I would advise every poultry man to keep only the limited number of hens that are required for breeding and to depend on pullets for laying. It will cost us to produce eggs at present feed prices for the month of December about \$1.82 a dozen for yearling hens and about 47 cents a dozen with Leghorn pullets. I am here figuring on a 37 per cent. production from the pullets. As a general rule we do not get a 40 per cent. production until February, and from then, of course, the cost per dozen will come down."

"What are you feeding your laying pullets?" I asked.
"We are feeding just the same as in other years," said Mr. Clarke. "We are feeding equal parts of oats, buckwheat, wheat and whole corn in the litter. We hopper feed with a dry mash of 200 lbs. bran, 100 lbs. corn meal, 100 lbs. flour, 100 lbs. gluten meal, and 100 lbs. beef scrap. Then the pullets have access to ground charcoal, oyster shell, green feed and water."

Mr. Clarke and I chatted over many other questions relating to the poultry business, in which we are both financially interested, and I went away satisfied that even in the present straits, sometimes the good poultry man has something more than a fighting chance to successfully conduct his business.—
F. E. E.

Do Your Hens Pay?

A CONVENIENT and simple form (to tell whether the flock is paying or not) has been worked out by the Poultry Division, Experimental Farm, Ottawa.
This form, which may be hung up in the poultry house or the kitchen, provides space for marking down each day the number of eggs laid. It also indicates space for recording the number of eggs and poultry sold or eaten, also space to note the feed bought or taken from the farm, and columns for entering cash receipts, expenditures and balances.

The form is a convenient place to keep your poultry account each month, and may be had on application to the Poultry Division, Experimental Farm, Ottawa, free of cost, providing a duplicate copy is sent to the Poultry Division each month.
If you want to know what your hens are doing, write for them.

It would not be wise at this or any other time to keep a larger laying flock than there is accommodation for in the poultry houses. If the birds are housed in small flocks of 25 each, there should be five to six feet of floor space to each bird. In large flocks of 100 or more, so much floor space is not necessary but at least four square feet should be allowed for each laying fowl. We would advise, therefore, that our friend retain all of the good fowl that he can comfortably carry. If intelligently cared for, the results are sure.

A CALL TO ACTION
is sounded in this issue of Farm and Dairy. See page 15.

Farm Management

Cleaning Grain for Seed

By Jno. Fixter.

IN using a fanning mill one must be governed by the condition of the grain he is cleaning. As the different grains have different weights per bushel it is necessary not only to use different sized screens, but also to regulate the wind, shake and speed of the mill to suit the different weights and sizes of grain to be cleaned. The fanning mill will only separate grains or seeds of different sizes or weights. The wind is one of the most important factors.

The first thing to do is to examine the grain thoroughly, see what other grains, weed seeds, etc., there are in it, and make up one's mind as to the best way to clean them out.

In cleaning oats for seed, regulate the machine according to directions on the mill. The first operation consists of blowing out all the chaff. Most of the very small seeds will go through the screen under the hopper, but a certain amount will go through the screen in the lower shoe. To make a perfect job and to get all the larger weed seeds, such as witchgrass, cockle, wild buckwheat, or even wheat and barley that are not the same size and weight as oats, the grain must be put through once or twice more.

The second cleaning requires quite a different operation. The riddles are to be arranged as for cleaning wheat, and anything of the size and length of wheat should go through the riddles, and the large, long, heavy oats should go over the back of the machine. Care must be taken to see that the proper slant is on the riddles so as to carry the oats over and all the grain, etc., down under the mill. In regulating the wind and shake, use very little wind, as you do not want to blow any of the light seeds or small wheat or barley over with the oats; and have very little shake, so that the oats will not be stood on end and go through, but slide over the back of the machine.

In cleaning wheat for seed, after the chaff and small seeds are all removed, take out one or two of the wheat riddles, and open all the wind doors wide. Good plump wheat, weighing 50 pounds per bushel and over, will take more wind than the average fanning mill can supply. The good, heavy grain cannot be blown over, but all the lighter grains, also oats and barley, ought to find their way over the back of the machine. Care must be taken to use conductors to carry the grain near enough to the back of the machine to give the wind a chance. When there is still some small grain or seeds left, it may be sometimes necessary to run the grain through twice. Should white caps in wheat (wheat hulls) be found troublesome to remove, select one of the long screens belonging to the lower shoe—just large enough to let the wheat through—place this screen directly under the hopper, and this will extend far enough back to carry the white caps out over the machine. This long screen will also be found most useful in cleaning oats, whenever there are thistle tops or joints of oat straw amongst the grain.

Many experiments have proven that careful fanning pays many times over for the trouble in cleaning the seed grain. You have pure, clean seed, free from weed seeds, and plumper seed produces heavier crops.

The basis of successful and profitable cattle feeding is the growing of high quality roughage in sufficient quantity on the farm.

Our Made-to-Order Barn.

John Wickliffe, Kent Co., Ont.

IN selecting the style of barn we never erect, we took into consideration some of the following points: Frame work, construction, clear space, neat appearance, trimmings, lighting, lightning protection and cost.

In the frame work of our metal barn the heaviest piece was just a 12-foot plank. Consider it against eight-inch and timber from 30 to 40 feet long. Getting out timber for a barn is anything but pleasant. We drew the frame and flooring in about 11 loads.

The construction of the metal barn is perfect, being braced with a patent brace sufficiently close to make it tight that can be depended on for durability. Regarding space, this is where the metal barn has a decided advantage over the frame type, as there are no beams of any kind from one end to the other. It is equipped with a car that can be tripped any distance from this end, making it possible for one man to mow away the hay.

The neat appearance of this barn is also apparent. On the inside, the

frame work, rafters, in fact all the wood work, is planed to a uniform thickness, making a clean, neat job. Rafters of single size, braced by a special brace, give the barn a half pitch on the hip, making it roomy as well as easy to work in. The barn is painted. Frame work, construction, the floor boards being covered with a piece made for that purpose. Ample eave troughs are furnished, to run the water to any corner of the barn desired.

We had two 60-inch roof lights, and two smaller gable lights put in, and also the granary light, and it is almost as light inside as it is outside.

The makeup of the glass seems to be perfect, being braced with each corner, the peaking ventilators (and I might say here that they are bird proof). Lastly, but by no means least, is the price. I think we got a better barn at the price than we could have gotten had we built of timber frame. More to the point, it is a barn that does not need to be painted and, in these days, this is worthy of consideration. I believe the day is coming when the farmer or dairyman will welcome the metal made-to-order barn.



Give Your Family New Joy and Life This Christmas

Christmas with its radiance of good cheer and rejoicing will soon be here. You can give to every member of your family a Christmas gift that will be sure to find its way home; that will brighten the lives of the little ones and cultivate their finer qualities. Give your children an opportunity to study music properly. They cannot get the proper touch on an organ. There is no home music like a piano.

Make this Christmas Children's Day. Their happiness depends upon you.

Williams Piano
ENDORSED BY GREAT MUSICIANS

make it the choice of master musicians and music lovers everywhere. Their expressed preference should influence you in favor of a Williams New Scale.

Send the coupon to-day for our special Christmas offer and beautiful portfolio of models and prices. You will receive a gift before Christmas Day. Just a little of your Christmas money will put a piano in your home on Christmas Eve.

THE WILLIAMS PIANO CO., LIMITED,
Department F.D.,
Oshawa — Ontario.

Please send to the address below full particulars of your Christmas Offer and the portfolio entitled "Art and the Critic."

Name
Street or R. R.
P. O. Province

NORTHERN RAILWAY

BIG MONEY IN TRAPPING THIS YEAR

FREE

Hallam's Trapper's Guidebook (paper) illustrated, English or French; tells how and where to trap; what bait and traps to use; full of useful information. Candidates paper illustrated; covers traps, animal bait, illustrations, fox, rabbit, muskrat and squirrel's habits, etc. Includes also prices and advance information on the raw fur trade.

Write to-day for yours. Address, using number given below.

Ship your RAW FURS

to John Hallam Limited

334 Hallam Building, Toronto

GLAZED SASH 65¢

Buy Now at Old Prices, 4 1/2 ft x 10 ft.

No. 1 clear white pine sash, already glazed. Specially low price for immediate shipment safely packed. Over sixty other sizes and 1 1/2 in. x 10 in. including house, barn and cellar, sash, also storm sash. We sell direct. Builders catalogue from THE HOLIDAY COMPANY LTD., Factory Distributors, Hamilton, Canada.

MAKE YOUR BIKE A MOTORCYCLE

at a small cost, by using our attachable outfit. Fits any bicycle. Easy to attach. No special tools required. "Compared With Others?"

Mr. C. F. Williams, 25 E. 12th St., Toronto, Ontario, Canada, N. W. 1st Floor, writes: "I have fitted my bicycle with your outfit and am able to use it as a motor cycle. It is a very simple and practical method of making a bicycle into a motor cycle. I have written the above for the benefit of my friends."—The Motor Cycle.

FREE BOOK bearing list of Motor Cycle Attachments, also Motor Cycle Outfits, complete. Our price from \$12.50.

SHAW MANUFACTURING CO., Dept. 105, Gaitherburg, Kan., U.S.A.

RENNIE'S SEEDS

We Buy Alaska, Red Clover Alfalfa and Timothy, Peas, Beans, Spring Ry, Buckwheat, etc.

WM. RENNIE CO., Limited
Cor. Adelaide and Jarvis Streets
TORONTO

EARN \$10 TO \$20 A DAY AT HOME

Help to meet the big demand for Healey shoes by selling them in your home trade. Induction persons provided with profitable, all-year-round business on a low capital. Experience and ability unnecessary. Write for particulars, name of day or night. Send 3 cents in stamps to Healey Shoe Company, Co. Ltd., Dept. 301, 21 1/2 College St., Toronto.

SHEEP AND SWINE

The Flock in Winter

IN feeding the flock of ewes during the winter, it must be remembered that the care which they get at this period will not only determine the vigor of the coming crop of lambs, but will also have an effect on the condition of the wool clip next spring. Alfalfa or clover hay, oat or pea straw and the leaves from corn stalks, should be utilized in the winter feeding, even if the best results are to be obtained.

Clover, or alfalfa hay, if of good quality, may be used as the sole feed until near lambing time. It will be found that from three to three and one-half pounds of good clover hay will be sufficient for ewes weighing less than 150 lbs. Oat or pea straw will be relished by the ewes.

However, it is not usually a satisfactory ration on account of the beads. Corn stalks placed where the ewes can eat off the leaves will help out on the roughage end of the ration, but if straw or corn stalks are fed, some nitrogenous food should be given also. Timothy hay as a sheep food is poor.

Roots, preferably turnips, and ensilage if fed to the ewes will do much towards keeping them in good health. Ensilage will make a cheap food for sheep, but should not be fed without clover hay in the ration. Avoid feeding spoiled, frozen or mouldy silage to

vide a shelter where the air will be fresh and where bedding will be kept dry.

Stability in Hog Prices

WHEN asked to increase his output of hogs, it is only natural that the farmer should inquire what is being done to protect him from loss. The result of any action to increase hog production which may be taken at the present time will not be apparent on the market until about 12 months have elapsed, and the farmer fears that something may happen within those 12 months which will influence the price of hogs and possibly wipe out his profit. It is only fair, therefore, that a clear statement should be made as to what has been done and what is under way to protect the interests of the farmer.

Our Food Controller has made an announcement that the profits of packing houses will, in future, be limited, and that such action will be taken that the farmer who produces the hogs shall receive as his share a fair proportion of the proceeds derived from the sale of the hogs. This action on the part of the Food Controller brings about a condition of affairs such as never before existed in this country, and should help to give the farmer confidence that his interests will be protected, and that he will not be left at the mercy of any large corporation.

In addition to the action of our own

Further, it is stated that American packers' cellars have never been so bare of hog product at the inception of a winter packing season as this year. During October and early one million pounds of meat were taken out of Chicago warehouses alone, and a similar raid was made at other points.

If we consider carefully the facts which have been stated regarding the attitude of Canadian and American Food Controllers, we must come to the conclusion that there is very little danger that a serious break in hog prices can occur. In fact, prices which were brought to bear in connection with United States markets are bound to reflect in turn upon our Canadian market, and the lack of supplies on hand in the United States, together with the decision of the American Food Administration to support the market when a heavy run of hogs takes place, should give the farmers confidence that hog feedings gives promise of having a profitable business in stock raising, and that the farmer who responds to the world demand for increased production of meat at the present time cannot very well suffer financial loss.

—Live Stock Branch, Ottawa.

Co-operative Lamb Shipping

SATISFACTORY, indeed, have been the results obtained this year by the Pontiac Live Stock Association through the cooperative shipment through the cooperative shipment of lambs. This work was first taken up because many of the members of the association were not receiving satisfactory treatment at the hands of the drovers. The wether lambs are being shipped to the Montreal, Toronto and Boston markets, while the ewe lambs are being sold for foundation stock for flocks, more especially in the newly settled parts of the country, such as in New Ontario.

The Pontiac Wool Growers' Association will handle about 2,000 lbs. this year. They were up cars to Boston recently and the lambs went through in fine shape. This shipment averaged 96 lbs., and were said to be the best lot of lambs going on to the Boston market this year. These lambs sold for \$17.25 at Boston, netting the farmers \$14.42 in their yards. At the same time the price of lambs on the Ontario side of the river was \$13.50. Breeding ewes are selling at one to two cents a pound higher than market lambs.

One result worthy of note is that the local dealers throughout the county in which the associations are shipping lambs, have shown up their prices to meet those of the association. In this way the action of the association has been of benefit not only to their own members, but to the sheep raisers throughout the districts served by these associations. Prices in Pontiac, for instance, have averaged about \$1 a cwt more than those being paid in Renfrew county across the river.

The Pontiac association was one of the first wool growers' associations to be formed in Eastern Canada. It was first organized for shipping wool in 1914. While Pontiac county, it is true, had a considerable sheep population when this association was organized, the majority of the flock were grades. Grade ewes were used largely and the quality of both wool and meat was not therefore at its best. In 1915 the association started sales of pure-bred lambs to include breeding stock. These were collected from local pure-bred flocks through Quebec. A few were brought in from Ontario and a few came from the pure-bred flocks at Macdonald College. This branch of the work has increased largely until this year when about 300 pure-bred ewes were secured through the ten associations in Quebec.

Good results have been obtained in every line of work taken up by the

The World's Food Shortage

By Herbert Hoover.

OUR allies are dependent upon us for food and for quantities larger than we have ever before exported. They are the first line of our defence, and our money, our ships, or life blood, and not least, our food supply, must be of a common stock. If we cannot maintain our allies in their necessities, we cannot expect them to remain constant in war. If their food fails, we shall be left alone in the fight, and the western line will move to the Atlantic seaboard. It is thus a matter of our own safety and self interest. It is more than this—it is a matter of humanity that we give of our abundance, that we relieve suffering.

Of no less concern than the dislocation of markets and the losses at sea is the decrease in production among the allies. If 40,000,000 men are taken out of productive labor and put into war and war work, there can only be one result, and that is diminution in production of food. Further contributing causes to this diminution are the lessening in the amount of fertilizer which is available, through shortage of shipping and losses at sea, and the consequent reduction in the productivity of the soil itself. This year the decrease in production stands out in more vivid silhouette than ever before.

sheep. Roots should be used sparingly to bred ewes until after lambing. Some grain will be necessary for the breeding ewes to keep them in proper shape, especially nearing spring time. The following rations taken from Farmers' Bulletin 846, of the United States Department of Agriculture, each contain approximately the amount of various nutrients required daily for ewes up to 140 lbs. in weight:

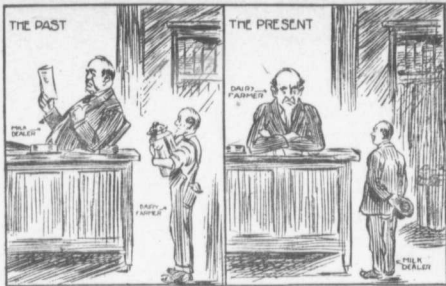
Ration No. 1: Two pounds alfalfa hay; two pounds corn silage; half pound shelled corn. Ration No. 2: Two pounds clover or alfalfa hay; two pounds silage. Ration No. 3: One pound oat straw; two pounds silage; quarter-pound oil meal; one-half pound corn or oats.

For a strong vigorous crop of lambs the ewes should have a moderate amount of exercise during the winter. This can be obtained by scattering their roughage over a field and allowing them to work back and forth over it while eating, or by feeding some of the roughage some distance from the shelter. At no time, however, should the ewes be forced to wade through deep mud or snow, nor should they have to jump over boards, nor pass through narrow doors. Such treatment is sure to cause loss of lambs or perhaps of both ewes and lambs.

Food Controller, we are assured by Mr. Joseph P. Cotton, Chief of the United States Food Administration, Meat Division, that the Food Administration will see that the producer at all times can count on a fair price for his hogs. He also states that a rigid control of the packers will be established, and that serious breaks in prices of hogs will be stopped. He closes his statement in the following words:

"Let there be no misunderstanding of this statement. It is not a guarantee backed by money. It is not a promise by the packers. It is a statement of the intention and policy of the Food Administration, which means to do justice to the farmer."

In the Breeder's Gazette of Chicago, under date of November 15th, the announcement it is made that the buying power of the United States Government, both on its own account and that of its allies, will be utilized for the purpose of stabilizing the hog market. Whenever a heavy run of hogs occurs the Food Administration will support the market by placing heavy orders, so that the packer will not be under the necessity of hedging in the provision of grain against the daily cost of his hog drive.



As seen by the Fraser Valley Milk Producers' News.

association in Pontiac. The sheep population of the county was approximately doubled to what it was three years ago, when the association started. That it is enriching the county may be seen from the fact that many of the farmers are receiving checks of over \$400 for their lambs this year. As the fleeces will pay for a sheep's keep, this amount can be counted as profit.

Inside Stable Dimensions

THERE is a very direct relationship between the length and width of cow stalls, and the cleanliness of the animals. Recently, I visited the stable of a prominent breeder of Holstein cattle, and his cattle were passably clean, although he had been out of bedding for a couple of weeks, and the shavings which he had ordered did not arrive. He had made a study of dimensions of cow stalls. His stalls were graded

from five feet five inches in length at one end of the stable to four feet 10 inches at the other end. The stalls varied in width from three feet eight inches at the long end to three feet at the other end. The cows were then lined up according to their size.

There is no advantage in allowing a cow too much room in a stall. For the small breeds, such as Jerseys, four feet six inches, to four feet ten inches, is long enough, and three feet is quite wide enough, on an average, with perhaps a couple of the cows in a herd that would require three feet six inches. For the larger breeds, such as Holsteins, the width will vary from three to four feet, and the length from four feet ten inches to five feet six inches.—F.E.E.

The first milk from a cow will often test less than two per cent, while the strippings test eight or 10 per cent. butter fat. The importance of clean strippings is evident.



**Ontario Farmers' Own Organization
The United Farmers of Ontario**

Farmers, have you studied the power of organization? Do you realize what organization has done for other industries?

The United Farmers of Ontario and The United Farmers' Cooperative Company were organized for YOU. Will you give it your influence and your business?

Have you a club in your locality?

Are YOU a member?

Are you going to attend the Farmers' Parliament, December 19th, 20th and 21st, in Toronto?

Reduced fares, good going December 15th to 21st, returning up to December 26th inclusive.

All farmers welcome. Ladies especially invited.

FEED SPECIALS:

Bran, Shorts, Cotton Seed Meal in car lots and less.

Groceries,

Lumber, Cutters, Gasoline Engines.

Buy Co-operatively.

Write for Prices.

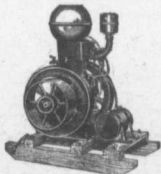
**The United Farmers' Co-Operative Co., Ltd.
2 Francis St., Toronto**



The Lister Engine
British Built

The Lister Grinder
Built in Canada

Used in every quarter of the Globe



THE LISTER

5 H.P. Engine and the Lister 9" Grinder is a combination that cannot be beaten



Designed especially for this market

The results given by the outfit illustrated above will astonish you, both in respect to quality and quantity of work done. When you have seen this grinding outfit and the work it does, you will realize that you CANNOT AFFORD to put your money into anything of inferior quality.

Write for Catalogue to Dept. "K"

R. A. LISTER & CO., Limited

WINNIPEG, MAN. TORONTO, ONT. MONTREAL, QUE.



Government Says Keep More Cattle This Winter

The Ontario Government advises all farmers to keep on their extra head of cattle this winter. You can do this most economically by cutting down your feed, as cut feed always goes farther.

Peter Hamilton Feed Cutters

will exactly meet your requirements, as they do the work quickly, easily and satisfactorily. Hand and power outfits in a wide range of sizes and prices.

Write To-day for Free Booklet.
PETER HAMILTON CO., LIMITED
Peterborough, Ont. 27

WANTED: POULTRY

of all kinds. We pay highest price. Write for price list.

WALLER'S
713 Spadina Ave., Toronto, Ont.

BE YOUR OWN

BLACK SMITH
FARMERS!
HIRE HERRING'S
BLACK SMITHS
FOR YOUR FARM.
THEY WILL DO ALL THE WORK
AND YOU WILL SAVE MONEY.
WRITE FOR FREE BOOKLET.
THE HALLIDAY COMPANY, Linn. HAMILTON
Factory Distributors.

THE HALLIDAY COMPANY, Linn. HAMILTON
Factory Distributors.

SHIP YOUR BUTTER & EGGS

to us. We are not commission merchants. We pay the highest prices and remit promptly.

THE WILLIAM DAVIES COMPANY LIMITED
Established 1854. TORONTO, ONT.

A FORTUNE IN POULTRY

Increase your egg yield by purchasing

A CHOICE PEN
of our high record Rocks, Wyandottes, Leghorns, or R. I. 1917 Mating List containing 45 photos of stock, buildings, feed and tonic formulas.

Our 854 Egg King
L. R. Guild, Box 76, Rockwood, Ont.

LUMP JAW

To remedy your eye troubles you have been planning a Lump Jaw Cure. Use it on your eyes. It is a sure cure. Hundreds of who will refund the full price if you do not get relief. Write for Free Booklet. LUMP JAW CURE. 813 Church St., Toronto, Ont.

\$200,000

to lend on Farms, First, Second Mortgages. No advance charges.
E. R. REYNOLDS,
77 Victoria St., Toronto.

Build Your Own Home

BUILDING OR REPAIRING
THE HALLIDAY COMPANY, Linn. HAMILTON
Factory Distributors.

THE HALLIDAY COMPANY, Linn. HAMILTON
Factory Distributors.

How a Young Farmer Broke Into Pure Breds

(Continued from page 7.)

without any trouble in feeding. The cows can usually be sold in the fall for within about \$10 of the price paid for them in the spring. Mr. McPhee pointed out one calf which had been raised on some whole milk and calf meal. Compared with the calves that have been on these nurse mothers for the summer, this one looked a very dwarf.

In the same way the heifers and mature cows are given off they can stand, no matter what the cost of feed may be. Roots are grown for early winter feeding and 20 acres of corn is grown for the winter feeding of the 50 head of cattle (including young stock) in the stable this year.

Mr. McPhee is endeavoring to build up a herd of stock which will show refinement and quality. At the time of his dispersion sale he had a few exceptionally good heifers in his stable, not only from the standpoint of type but also of color. He prefers a Holstein with considerable white, although as he states "a good horse is never a bad color."

The Herd He Built

In the spring of 1916 Holstein breeders had an opportunity of bidding on the herd of 80 head of pure bred at the dispersion sale held by Mr. McPhee. From the number of breeders who attended and the prices they paid for the stock, it is safe to say that Mr. McPhee has in the 15 years he has been at work, succeeded in building up a herd of merit. This home-bred and home-developed herd was backed by the record of the show ring, public milk tests and official records. A few of the outstanding animals in the R. O. M. which were sold at this sale were:

Jessie DeKol of Crystal Spring, 4 years old, 29.57 lbs. butter, 53.7 lbs. milk with a test running up to 5 per cent fat.

Glady DeKol, 4 years old, butter 24.22 lbs., milk 620 lbs., in seven fourteen days. Gladys DeKol's average for seven days' milk was practically 30 lbs., and her best day's milk 91 lbs.

Daisy Netherland Sylvia, 4 years, butter 21.06, milk 585.09 lbs.
Pauline Sylvia Clothie, 4 years old, butter 22.76, milk 540.04 lbs., in seven days.

Reta Connelia, at three years old, butter 19.99 lbs., milk 404 lbs., in seven days.

Rose Wayne, 3 years old, butter 19.72 lbs., milk 408 lbs., in seven days.
Saddle Mac, 2 year old, butter 20.59 lbs., milk 478 lbs., in seven days.

Kate Sylvia, 3 years old, butter 28.94 lbs., milk 575 lbs.

Corr Heneverfeld Korydyke, 3 years old, butter 21.55 lbs., milk 478 lbs., in seven days.

Orme of Crystal Spring, 3 years old, butter 18.19 lbs., milk 400.09 lbs., in seven days.

Patricia Brooker, 6 years old, butter 18.97 lbs., milk 355 lbs.

This record was made by this cow two months after calving and after she had completed the fair circuit. In a strong class at Sherbrooke she won first in color test and first in open class, indicating beyond any measure of doubt that she possessed both show and quality and individual excellence in milk production.

Some idea of the success of this sale may be gathered from the fact that the average price for mature cows was \$277. The highest was paid for Jessie DeKol of Crystal Spring, she selling for \$690. One row of 21 cows in the stable sold for an average of \$310.

This dispersion sale was used by

Mr. McPhee as an advertisement to the Holstein breeders that he was in the business. The building up of a herd of 80 head is no easy task and Mr. McPhee does not again intend to dispose his herd by auction. He will build up a bigger and better herd than ever, but will just sell off his surplus from time to time. The successful auction sale of 1916 will be sufficient advertisement as to the type of stuff he is breeding.

Will be Better Than Ever.

Sixteen head of the young stuff were reserved from the dispersion sale to act as a foundation for the new herd. The animals reserved were from the best cows disposed of in the sale. Beauty DeKol of Crystal Spring, a daughter of Jessie, is one of the promising heifers in the stable. Two daughters of Patricia Brooker, the cow that won first place in the dairy test at Sherbrooke, have been kept. A daughter of Lady Jane of Burnbrae, a 22-lb. cow that is now being

that this has all been brought about by a young man who started into pure bred in a small way, breeding and weeding until he had changed the grade stock on the farm to pure bred.

Nine head of horses were standing in the stable at the time of my visit to Crystal Spring Farm. Mr. McPhee pointed out one of his brood mares 17 years of age from which he has sold \$1,650 worth of colts, besides those that are at present in the stable. In the same way the sheep are revenue producers on the farm. Last year 22 ewes were kept over winter, some of which were pretty young. After expenses of feed and management were deducted Mr. McPhee reckoned that he had \$400 for an income from his sheep. The abundance of pasture on this farm make sheep a particularly profitable type of stock. They go out on the pasture early in the spring and come in late in the fall.

Mr. McPhee has gone far in pure bred work in the 15 years he has been on it. He has a steady and sure plan, his idea is in the type of Holstein, and his pure bred Holsteins have from

The Future Demand for Dairy Products

WHAT is the future for the dairy industry in Canada? J. A. Ruddleck, Dominion Dairy Commissioner, is optimistic. Speaking at Hamilton two weeks ago, he said: "There never was a time when prospects were so good. There has been a great demand for the dairy herds of Europe. I have had correspondence with friends in the principal dairy countries over the water, especially Switzerland, Denmark and France. In all of these countries feed is lacking to carry the live stock over the winter. The depletion in number of milk cows is particularly serious in those countries, and the same is true in Holland. It will take years to rebuild these herds and in the meantime Canada will be called on to supply Europe with immense quantities of cheese and butter."

Mr. Ruddleck stated further that cheese exports this past season have totalled \$40,000,000 in value, that the output of customary butter in 1917 will be \$35,000,000 and that the total value of the dairy industry will not fall short of \$200,000,000—a record.

prepared at the Experimental Farm for a greater record, and other heifers chosen from the herd both for their breeding and their individual test, stand in his stable.

Two cows from F. Mallory's herd have been purchased to supplement the foundation stock for the new herd. These are Floral Hermes and her mother Hazel Hermes. These are big capacious cows, giving up to 65 lbs. of milk. Although they have not yet been tested, Mr. McPhee is confident that they are both easily 30-lb. cows.

The sire placed at the head of the new herd is Sir Echo Sylvia, a promising young bull of 20 months. He was sired by Inka Sylvia Beets Posch and is therefore half brother to May Echo Sylvia. His dam is May Darkness Echo, a tone 22.51 lbs. fat as a three-year-old. This bull is from the herd of S. J. Foster, Bloomfield, and is a full brother of Sir Echo Beets Posch, the present herd sire for A. G. Hall. The sire of Sir Echo is Premiering May Darkness Echo for test this year and expects her to go over 30 lbs. butter.

Although Mr. McPhee has already 50 pure bred in his stables. As it is only a year and a half since his dispersion sale, the stuff in his stable is yet pretty young. He intends, however, to begin his R. O. M. work again next year and from the type of stuff he has in his stables, he should get some considerable records.

Real Pure Bred Farm.

The owner of Crystal Spring Farm is an enthusiast so far as pure bred livestock is concerned. The best of Holsteins, Crystal Spring is the home of pure bred Cleveland horses, Oxford Down sheep and White Holland turkeys. Even the fowls kept on the farm carry in their veins blood as pure as the best. His breeding affairs, and it must be remembered

time to time goes into the best herd in the country. He is a careful breeder and will make his influence felt in the Holstein world.

FOR SALE AND WANT ADVERTISING

THREE CENTS A WORD, CASH WITH ORDER

WHITE AND COLUMBIA WYANDOTTES, LIGHT BRAHMAS, & C.
WHITELY LEHORNS.
Michael K. Boyer, Box 23, Hammonds, N.J.

FOR SALE—Barred Rock Cockerels of good laying strain.—J. H. Cook. Mrs. Wm. Cahill, Martindale, Que.

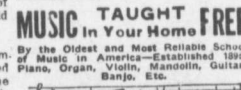
CHOICE DAIRY FARM, 3 miles from Brockville, half mile from school, approximately 45 acres, all cleared and in good condition. Well fenced, modern dairy barn accommodates 30 head, running water, silos and manure treatment. Stone residence has modern conveniences, electric lights, water supply, bathroom, self-widow floor, etc. Owing to death of his wife, owner presents. Apply Room 7, Citizen Building, Ottawa.

WANTED—Steady middle-aged man to do general farm work. State experience and wages expected. L. Agar, Kleinburg, Ont.

WANTED—To purchase a quantity of clover hay. Frank Dixon, R. R. No. 2, Niagara Falls Station, Ont.

MUSIC TAUGHT FREE

By the Oldest and Most Established School of Music in America—Established 1895. Piano, Organ, Violin, Mandolin, Guitar, Banjo, Etc.



Beginners and advanced players. One lesson weekly illustrates music everything plain. Only expense about 10¢ per day to cover music and music used. Write for FREE booklet which explains everything. The best. The best. The best. American School of Music, 76 Lakeside Building, Chicago.

Farm Help Will Not Be Drafted Food Production Vital

"I will see to it that if any farmer's son, honestly working on a farm for the production of food, is drafted, he will be discharged from The Canadian Expeditionary Forces, if he goes back to the farm."

—Gen. Mewburn, Minister of Militia,
Dundas, Nov. 24th, 1917.

"In the general policy of the law and instructions issued to the tribunals, the farming industry is certainly recognized as one of the utmost importance to the national interest and therefore it is the duty of the tribunals, in the proper execution of the responsible duty with which they are charged to see that effect is given to farmers' claims in proper cases."

—E. L. Newcombe, President Military
Service Council, Ottawa, Nov. 26th, 1917.

ENTITLED TO EXEMPTION—"Men who are habitually and effectively engaged in the growth of agricultural products and whose labor cannot be diverted from that occupation without substantially diminishing the necessary supply are, in the view of the Military Service Council to be entitled to exemption, so long as they continue to be usefully employed in farming. It is assumed that the tribunals will realize that the farming industry should compete successfully with military service in those cases where it is established that the withdrawal from the former occupation of men qualified for the latter service, will materially diminish the output or production necessary for the maintenance or efficiency of the expeditionary force or the support of the people at home."

—Military Service Council, Ottawa, Nov. 26th, 1917.

The country relies on the farmer, not only for food, but for striking a sane balance on political matters. Free from the turmoil of city life, he has a sane, clear view of large affairs.

In the present crisis he recognizes clearly that the real political leaders of both parties have cast aside party allegiance and have joined together for the winning of the war. This is the one great issue and to see it accomplished requires the whole-hearted support of every patriotic Canadian.

Support Union Government

Quebec, which has not done its duty in this war to its mother country, France, to the protector of its liberties, Great Britain, or to its native land, is solidly lined up against Union Government with the determination, rabid in its intensity, to bend the rest of Canada to its will. By appealing to the slacker it hopes for Victory.

Unionist Party Publicity Committee

Why Do We Condemn Inbreeding?

It Offers the Only Hope for Real Breeding Progress—Raymond Pearl

THE art of breeding is once a conservative and a progressive matter. It is conservative in the sense that it holds steadfastly to certain definite and relatively fixed ideals as to what the perfect animal should be. It is progressive in the sense that it bends every effort towards the attainment of those ideals. While it is, I think, unquestionable that these statements are true as general propositions, they are equally true that many breeders of animals exhibit in their practice rather striking exceptions to them.

To the true breeder it is unbelievable, and indeed unthinkable, that there should be so many men as there are who breed without any definite ideals whatsoever before them. Again, there are the so-called breeders whose ideals are perennially subject to change "without notice and without doubt." To-day one type or one family is the greatest, indeed the only hope of the breed to one of these men. Meet him a year hence and you will discover, somewhat to your astonishment and confusion, that a totally different type, or wholly foreign blood lines, offer the only chance to stay the rapidly progressing annihilation of the pure persons breeders. They belong mentally in precisely the same category as the colored gentleman of the story who averred that he didn't know where he was going, but that he was on his way.

Keep Ideal Ever in View.

Success in breeding is possible only for the man who has a definite, and for him permanent, ideal as to the kind of animals which he wants to breed. This ideal is something which must be always in his mind as he breeds, or buys stock to add to his herd or flock or sells stock from it. Lacking such a definite ideal the breeder is worse off than the mariner without a compass, because he not only lacks a means of guidance but also has no notion of what port he would like to arrive at if he could.

If he is to be successful the breeder must not only have an ideal but must also stick to it, and not change it every time he makes a mating. This implies that the breeding must fall within definite and rather narrow blood lines. It may fairly be said that some degree of narrow breeding (line breeding or inbreeding) is an essential for the highest success in breeding.

This may seem a radical statement, but a careful study of the history of the best improved strains of live stock of all kinds leaves no room for doubt that the attainment of the highest degree of excellence has always been associated with the practice of a very considerable amount of inbreeding, of rather close degree. It is a curious paradox of animal husbandry in general that while, as a matter of fact, every successful breeder of high grade stock practices inbreeding to a greater or lesser extent, a great many of the most violent, even fanatical, opponents to inbreeding in theory. Most of them will deny stoutly that they ever practise inbreeding. They contend that they practise "line breeding," but never, never "inbreeding."

Line Breeding a Form of Inbreeding.
The distinction here is obviously verbal and not biological, being in its essentials precisely similar to that between "freed and unfreed" slaves. What is called "line breeding" is simply a less intense form of narrow breeding than that which is called "inbreeding." The essential and im-

portant biological point is that what is actually done is to purify the stock in respect to all characters to as great a degree as possible. What the successful breeder aims to do is to get his stock into such condition that he has only one kind of "blood" in it. Expressed more precisely, though unfortunately more technically, it may be said that the breeder endeavors to get his stock homogeneous with reference to all important characters or qualities. The quickest way, indeed the only way, practically to obtain this result is by the practice of some degree of inbreeding. Sometimes a great stride towards the desired end may be made by mating brother and sister or parent and offspring together.

That a mating of such close relatives will surely result in disaster is one of the carefully nursed superstitions of breeding, which has often been explained, but will doubtless always be with us. It may be said that all the evidence we have is gleaned from the experience of stock

system of selective breeding the point is reached where these germ cells are pure with reference to a particular character, or degree of a character, then that character will unfailingly appear in the offspring, in the degree of perfection in which it is represented in the germ cells. This is the highest goal of the practical breeder. But in sexually reproducing organisms like the domestic animals purity of the germ cells with respect to the determiners of any characters, is only to be obtained, in the hands of a practical breeder without special scientific training, by the practice of inbreeding.

It should be clearly understood that indiscriminate inbreeding without definite purpose or reason is not advised or advocated. What we do mean is this: all successful breeding is the working out of carefully made plans looking toward the attainment of a definite ideal. In those plans narrow breeding has a place.

New Blood May Prevent Improvement.

Introduction of new blood for purposes of rejuvenation or revivification is, as ordinarily done, one of the

most successful means of improvement. In other words, he has substantially purified his stock relative to the characters which interest him. But he does not know that his stock will come out better and is measurably better than his. If A is to get his stock up to the B level he must introduce some B blood. This has long been the breeder's procedure, and if done in the right way, it is found to be as successful in practice, as it is justifiable in theory in the light of modern ideas respecting inheritance. The danger in the matter is such a case. In such a discussion all turns on the way in which the thing is done. If one feels it to be desirable, for the reason specified, to introduce "new blood" let him by all means do it gradually, and not mix the whole stock with the new original combinations all at once. For if he does he may destroy in this way at one blow results which have taken years of careful breeding to build up.

Dairying in the Prairie Provinces

W. F. Stephen, Huntington, Que.

TO one who has an intimate acquaintance with the progress of the dairy industry in Western Canada a visit to that country cannot fail to reveal wonders and not stop at that. This advancement can be classed under four heads: 1, Increased output; 2, Improved quality of products; 3, Businesslike management; and 4, Increased demand for improved stock, especially cows.

The increased output of butter, cheese, cream and milk is phenomenal, especially when we take into consideration the conditions under which such products are produced a few years ago. The examination of statistics shows an increased output of all these products of over 300 per cent. since 1911. This has been done by a well-organized system of management successfully by the Departments of Agriculture, under the supervision of the Dairy Commissioners of the three provinces in question. Also, the organization of large dairy companies in the largest countries, to which the cream is sent from their many receiving stations on the various lines of railways. The bulk of the milk which supplies the cities is also brought in by these companies by rail. Through all the hard times that the west has lately passed through, the dairymen felt the pinch the least of any. He had his monthly cheque, which enabled him to pay his bills (which was, and is, perhaps the best argument in favor of dairy farming), while the grain farmer had to secure credit from his local bank or merchant to tide him over. His returns are sure and regular.

The quality of butter and cheese now made is high-class, and according to the awards at western exhibitions this year, western butter was superior to that made in Ontario and Quebec, as there were numerous exhibits from all these provinces. Primarily this is due to the cool climate of the west, but principally to the system of grading the cream, to pasteurization, and the change to cream sweet. This gives a mild-flavored butter with splendid keeping qualities, and requires less salt. Such a quality of butter sells for the highest market price anywhere. Hence the eastern provinces could take a lesson. I mention the business end, as this is of great importance. Business methods have been adopted from the start. The producer is paid regularly and for what he gives. In Ontario he delivers 40 per cent. cream he is paid accordingly. If he delivers milk, whether for cheesemaking or city trade, he is paid according to the quality of his milk, such as "butter" and other solids. If the basis is

We Should Save Our Breeding Stock

TO maintain fertility: The application of manures from live stock has proved to be the best and most economical way of maintaining production. Land that is not manured frequently becomes so depleted in fertility that profitable yields cannot be obtained. On light sandy lands or lands that are subject to drouth especially, it is important to apply manures. Therefore, even those who this year are short of feed owing to drouth, should manage, if possible, to maintain their foundation stock. To convert waste products into cash: Waste land and stubble fields may be pastured, corn stalks, straw, and other coarse feeds, otherwise unmarketable, may be turned into cash for the farmer by cattle or sheep. Through the pasturing process the farmer is able to supply his farm with valuable fertilizing material, at the same time to retain on the farm valuable fertilizing material. Good prices for live stock are likely to prevail for some time and it will be possible to make good profits from properly conducted stock raising.

While there are other reasons which might be advised for keeping live stock, the three mentioned are fundamental and efficient, warranting every land owner in borrowing money to buy feed and going to almost any extreme to preserve his foundation of breeding stock.—Andrew Boss.

breeders indicates that the results which follow inbreeding depend entirely upon the nature of the individuals inbred. If one inbreeds weak animals, lacking in constitutional vigor, and carrying the determinants of undesirable qualities in their germ cells, the offspring resulting from such a mating will undoubtedly be more nearly worthless than were their parents. On the other hand, one inbreeds in the same way strong and vigorous animals, high in vitality, and carrying the germinal determinants of desirable qualities there may be expected a corresponding improvement in the quality of the offspring. The time has come when a vigorous protest should be made against the indiscriminating condemnation of inbreeding. It should be clearly recognized that if the expert breeders extending throughout the world, and as far back as trustworthy data are available, means anything at all, it plainly indicates that some degree of narrow breeding is an essential to the attainment of the highest degree of success in the breeding of animals.

The Influence of Germ Cells.

This contention receives full support from the results of modern exact studies in genetics. Such studies show that the personal characters acter to the personal characters actors of the parents have no causal of the progeny. What the progeny shall be like is determined by the constitution of the germ cells of the parents. When by a proper

surest ways to prevent any real or permanent improvement of stock by breeding. The difficulty here is that when one introduces new blood he runs the risk of introducing a whole set of characters inferior in their degree of perfection to what he already has in his own stock. As a matter of fact the average breeder is usually much too ready to introduce new blood. If one is breeding in certain definite blood lines and getting good results he should be exceedingly conservative about introducing any new blood, and should only do so when he has absolutely sure evidence that it is actually necessary for one reason or another.

There are two main reasons which induce the breeder to go out after new blood. The first is a fear of the evil consequences of inbreeding. This fear is usually, in the particular case, absolutely without foundation in fact. Yet how widely prevalent is the idea among cattle breeders that at least as soon as once in every three or four years one must go out and buy a new bull. It passes all comprehension that any intelligent person could expect to make steady progress in breeding on such a system.

When to Introduce New Blood.

Again the careful breeder sometimes finds himself in this situation. He has by well planned and executed breeding brought his stock up to a particular level of excellence. There the improvement stops. His animals breed true to that particular degree of quality but cannot be made to

three per cent. milk, about four cents above that test. In the event of a producer, delivering a low test milk, he cannot skim a part and add to the other, as his test for solids would be too low. This is having the effect of causing farmers to be careful in the selecting of sires from high-testing families. Western conditions are most unfavorable to the cow producing milk of low test.

The success of the dairy industry is causing an increased demand for good dairy cattle in the prairie provinces. The farmers want them large, well-

developed and with good tests. The demand for pure-bred sires is on the increase. Many of these sires and good cows must go from Ontario and Quebec. Our breeders must see that none but the best are sent. Already too many culls have been shipped west to the hurt of the eastern breeders and the injury of the dairy industry in that country. Then, too, the importer must be willing to pay a price consistent with the quality demanded; only then will strong dairy herds be built up and dairying become the most remunerative line of farming in western Canada.

Successful Pioneer in Saskatchewan Dairying

How D. A. Thompson Achieved Success on the Prairies

THIRTY-TWO years ago Mr. D. H. Thompson trekked westward from Old Ontario to locate at Boharm, Sask., and to found what is now well-known as Braeburn Farm, the home of many of the best breeds in the western Holstein world. The story of Mr. Thompson's fight for success in the pure-bred business is an inspiring one, and may be briefly summed up in four words: grit, push, perseverance, and the gathering of the knowledge of his chosen vocation from all sources by the application of the wise man's principle, "Here a little, there a little." As an instance of Mr. Thompson's methods of acquiring knowledge, and one to which beginners in the pure-bred business would do well to take heed, he keeps a scrap book in which are descriptions of how most of the noted Holstein cows were bred and developed. These were laboriously collected from various magazines and papers through a period of years.

A few of the leading principles of success in the breeding of pure-bred stock, given by Mr. Thompson, may well find a place here: "Read books by authorities on breeding; do not rest to accept everything, but to know what others practice; see and study as many animals as you can; shows offer a great opportunity; study your subject from men, from animals, from books and from papers." Occasionally one hears that the soil and climate of Saskatchewan are not conducive to the production of such large amounts of butter and milk as in what we sometimes think is our more fortunately situated province of Ontario. The best and certainly an unanswerable argument to such an objection is the splendid herd of Saskatchewan-bred Holsteins, which stand so near the top of the list in official and semi-official dairy tests in Canada.

In all his work with dairy cattle Mr. Thompson used only such feeds as are easily grown on his own farm. Out shaves, sweeds, oat, clover and bran, supply nearly all the feed. A very small amount of oil cake and cotton seed meal make up the balance. And when one considers that Phoebe, Phoebe De Kol, during the year she made 14,000 lbs. of milk, consumed but \$67 worth of feed outside of her pasturage, and that this 14,000 lbs. sold for \$2 a cwt., or \$280, one can see that a substantial profit remains with Braeburn Farm outside of the value of her calf. It is facts like this that lead Mr. Thompson to believe that Western Canada breeders of dairy cattle are not handicapped by any obstacles that cannot be overcome.

In the development of his herd of pure-bred Holsteins Mr. Thompson has shown those qualities of head and heart that are the fundamentals of success in any business. For often is the breeding of pure-breds undertaken from purely mercenary motives, the

breeder looking only to the filthy lure he can get from and caring little for the improvement of his chosen breed. Not so with the owner of Braeburn Farm. Across his story is written the fact that there is no royal road to success in the breeding of pure-bred stock. To quote his own words: "It requires knowledge, constant attention, keen observation, patience and perseverance. The successful breeder must bring to his task more than mere mercenary motives. He must regard the improving of his chosen breed as a task in itself worth while, and apply himself to it as the artist does to producing a great painting."

Milking Machine Solution

WHAT strength should I make chloride of lime solution in which the milking machine tubes and test cups are to be immersed?—J. M., Huron County, Ontario.

The correct proportion is one pound chloride of lime (full strength, 33 per cent. available chlorine) to ten gallons of water. To make the solution, mix one pound of chloride of lime in one gallon of water, in an enamel pail, trough or wooden tub. The chloride of lime has a corrosive effect on a metal vessel. Allow to stand for two or three hours giving an occasional stir, pour off the clear liquid and add sufficient water to make ten gallons. Immerse the rubber tubes and test cups in the solution. It will be good for about two weeks in summer and three weeks in winter.

The metal parts of the machine should be thoroughly washed and scalded each time after use. The test cups and rubber tubing should be fitted on the machine and well rinsed out before and after use each time. Warm water should be used for rinsing before milking to remove all traces of the chloride of lime. Warm water and washing powder should be used first after milking and then hot water before putting the tubes and test cups in the chloride of lime solution. The test cups should be taken apart at least once a week and given a thorough scrubbing with hot water and washing powder and the tubing well brushed with brushes provided.

Holidays and Payment of Wages

WHAT holidays is a hired man on a farm entitled to? Can the hired man be withheld when he leaves before his time is out, he being under age and hired for a certain number of months?—A Reader.

A hired man working upon a farm is only entitled to such holidays as may be agreed upon between himself and his employer at the time of hiring. A hired man working upon a farm is expected to do chores on Sunday, unless there is an agreement to the contrary. A hired man will not be paid his wages for the length of time he worked for you.

"This is the Kind of Horse the Government wants"



No horse with Spavin, Splint, Ringbone, Curb, Dony Growth, Capped Hock, Wind Puff, Strained Tendon or Sweeney can now pass the keen-eyed Inspectors of the Government Remount Stations.

Splendid-looking Horses—otherwise sound—arc being turned down because of some blemish that could be quickly cured with

Gombault's Caustic Balsam

Here is your chance to make money for yourself and at the same time to help in the Government's great Thrift and Production movement.

Put your horse into condition with Gombault's Caustic Balsam. A safe and reliable remedy.

Gombault's Caustic Balsam if applied immediately after lumps, bruises or cuts, is a perfect antiseptic—soothing and healing. An absolutely safe, external remedy for man or beast.

Every bottle of Caustic Balsam sold will surely give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by parcel post with full directions for its use. Send for descriptive circular, testimonials, etc.

THE LAWRENCE-WILLIAMS COMPANY TORONTO, ONT. 20



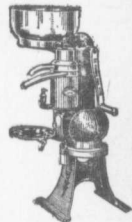
WAR PRICES

are being quoted our Dairymen for their dairy products.

And with the increased demand and the higher prices you will all keep your "Milk Factories" working right up to the limit.

This, of course, doesn't necessarily mean that you, too, need be kept "on the jump" all the time.

Here's the point—Let a



B-L-K Mechanical Milker AND A SIMPLEX CREAM SEPARATOR

help you take advantage of your opportunity.

A 1,100-lb. SIMPLEX will separate your milk with less work than 500-lb. machines of other makes, and one of the many big things in favor of the B-L-K is that the dairymen can easily produce Clean and Sanitary Milk in the ordinary dairy barn. CLEAN MILK MEANS A CONSTANT DEMAND.

We'll gladly give you an estimate of just what it will cost you to put in a B-L-K Milking Machine to save you all the old-time hard work of milking your cows. Send us rough plan of your stable and tell us how many cows you want to milk.

D. Derbyshire Co., Ltd., Brockville, Ont.

When You Write—Mention Farm & Dairy

Spraying Insures Profitable Crops

You know that as well as we—no need to argue that point. The only question for you to consider is, which sprayer is the best and most satisfactory for your purpose. Listen—

Spramotor

ISN'T A SPRAMOTOR unless we made it

Our experts made a careful, personal study of the actual spraying requirements for every possible condition, and then designed a sprayer for each need—not one for all. The result is, that Spramotors will give greater satisfaction and longer service in your particular sprayer you can possibly buy. Made in many different styles—both hand and power. Write for free descriptive booklet and treatise on Crop Diseases.

Made in Canada. No duty to pay.

**HEARD
SPRAMOTOR CO.**

4035 King Street,
LONDON, CANADA.



Between Ourselves

WE present you herewith our "10th 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 in fact of any 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 22,000 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

Direct Legislation and the Farmer

By F. E. Ellis, B.S.A., Editor of Farm and Dairy, Peterboro, Ont.

A FARMER, retired from active management of his farm, decides he will still continue the operation of his property and goes out to hire a manager. A suitable man being found, the two draw up an agreement. It may cover one year or a period of years. There will be certain clauses that any farm owner in his right senses would insert in this agreement. First, he will reserve the right to initiate any line of work on the farm that he chooses; for instance, he might decide to establish a dairy herd and cut down the number of steers fed. Secondly, he will require that all important questions of management be presented to him for his approval, and he will pass judgment on each question separately as he sees fit. Thirdly, he will reserve the right to discharge the manager at any time if he refuses to run the farm as the owner desires. In other words, the farmer wants direct and constant control of his own business.

But this farmer is also a citizen, and as such he is interested in the management of the biggest business of all, that of the State. What agreement does he draw up with the men he selects along with his fellow-citizens to manage the State business? He votes for the nominee of one party and elects him to office for a period of four or five years. He has no check on the man thus elected. His representative in Parliament can do just as he pleases. If Mr. Farmer and a majority of his fellow-citizens desire some special legislation, they have no way of requiring their representatives to give effect to the public will. On the other hand, the representative, once he is safely elected, may squander the public money, exploit the public resources of the country, and refuse to pass desirable legislation, and the citizens, his employers in theory but not in fact, have only the doubtful satisfaction of putting him out of business at the end of his five-year-period, and engaging another manager (member) on the same terms. Could human ingenuity devise a more remarkable system of running the country's business?

The referendum, which is another form of direct legislation, provides that the people shall have the power, should they desire to exercise it, to force the government, through the presentation of petitions, to submit any proposed measure to a vote of the



The Kind That Makes Dairy Profitable.

Moreover she has proved it. In 9 months in R.O.P. as a 2-year-old, Lily Pamela Butter Girl made for her owner, Mr. Arthur Becker, of Waterloo County, just a little over 13,000 lbs. milk.

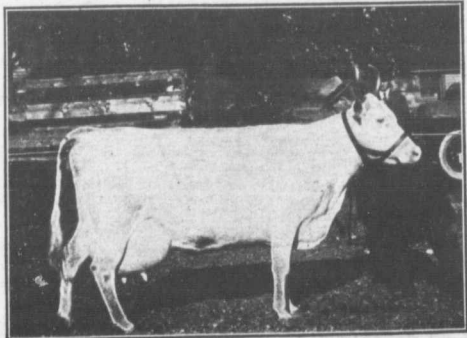
people before it can become law. Thus, land or money grants to railroad companies or other similar important measures, could not be put into effect without the public having an opportunity to block them. Thus the power of the "big interests" on the government would be largely broken.

In America direct legislation has been successfully tried out in well over a dozen states of the American union. It is in use in our cities and towns in Canada in connection with all money bylaws. The prairie provinces have adopted modified forms of the initiative and referendum, due largely to the influence of the organized farmers' associations and the ladies of Alberta have already made use of the initiative in their province to secure the vote.

The fertilizing value of live stock manure depends primarily upon the character of the feed fed, since animals retain only a very small portion of the fertilizing constituents of the food furnished. On the other hand passing feed through live stock does not increase its fertilizing value. Animals fed largely on straw, timothy hay and corn stover will produce manure low in fertilizing elements, but if alfalfa, clover and rich grains are fed the manure will be rich.

BETTER TURN NOW

to page 15 and read the special offer we are making to all readers.



MOUNTAIN LASS—One of the splendid types of Ayrshire females sold by the Southern Counties Ayrshire Breeders at their annual sale last year. Some unusually fine offerings will comprise their sale at Woodstock on December 19th next.

When You Write--Mention Farm & Dairy

England Needs Most NOT MEN But Food and Ships

The greatest need of the Allies is food—more food—and still more food—and the ships to carry it in. In speaking of the food situation recently, Lord Rhondda, the British Food Controller, said:

"The danger of the food situation lies not so much in the submarine peril as in the world shortage of cereals, meats and fats. . . . The tightening of the blockade is a two-edged sword. Imports of bacon and other products into the United Kingdom from Denmark are bound to be seriously reduced. This throws us more than ever upon the North American continent for our supplies. What we ask from the United States and Canada we cannot procure elsewhere. Unless the Allies in Europe are able to import the supplies necessary for feeding their armies and their civil populations, victory may slip from our united grasp."

Speaking in Winnipeg on October 22nd, Hon. T. A. Crerar, Minister of Agriculture, read a cablegram from Lord Rhondda as follows:—

"The Allies need from America next year ten million tons of foodstuffs, representing an expenditure on wheat, flour, bacon and other products of three to four millions a day. Canada, with the United States, must do her share in conserving her food supplies and increasing her production."

Surely then, Canada's duty is plain—every energy should be strained to produce food to the limit of her ability. Robbing our farms of the needed men "would be but blundering into another folly." Instead of handicapping the already overworked farmer, by taking away his help, let us rather assist—give him tractors as cheaply as they can be purchased anywhere—give him all the machinery without a tariff barrier—let him have free fertilizers. Only in this way can we hope for a great stimulus in our greatest national industry—farming—and a radical decrease in the over-burdensome high cost of living.

Liberalism stands hand-in-hand with the farmers' interests in this fight for liberty, as indicated by the following comparisons:—

THE LIBERAL TARIFF RESOLUTION OF 1917.

During the last session of Parliament (May 23rd, 1917), the Hon. Frank Oliver, on behalf of the Liberal Party, moved the following resolution:—

"In the opinion of this House it would be in the public interest if the Customs' Tariff Act were so amended as to provide:—

"1. That wheat, wheat flour and all other products of wheat be placed upon the free list.

"2. That farm implements and machinery, farm tractors, mining, flour and saw-mill machinery and repairs for same, rough and partly dressed lumber, illuminating, lubricating and fuel oils, cement and fertilizers be added to the free list.

"3. That staple foods and food products (other than wheat flour), domestic animals and foods therefor, be admitted into Canada free of duty when coming from and being the product of any country admitting like Canadian articles into such country free of duty.

"4. That substantial reductions be made in the general tariff on all articles imported into Canada, excepting luxuries.

"5. That the British Preference be increased to fifty per cent. of the general tariff."

This resolution was moved on May 23rd, 1917, by the Hon. Frank Oliver, ex-Minister of the Interior in the Liberal Government, and seconded by Mr. F. B. Carvell, M.P., for Carleton, N.B.

The members of the Conservative Party to a man registered their vote against the resolution.

Yet when a delegation of farmers, representing the great farmers' organizations of both Western Canada and of Ontario and the Canadian Council of Agriculture, waited upon the Government for free tractors, duty free fertilizers, etc., their interests were completely ignored, because of the "Big Interests."

The Canadian farmer has not a ray of hope that his interests will be considered by the proposed Union Government. This is indicated again as follows:—

FREE BRAN, SHORTS AND MIDDINGS.

In the House of Commons, on Tuesday, May 1st, 1917, Mr. J. A. Robb, ex-Liberal member for Huntington, gave notice that he would move the following resolution which he did on May 21st:—

"To ensure a plentiful supply of bran, shorts and middlings for the farmers to produce milk, cream, butter and cheese, and for the raising and fattening of live stock, this House is of the opinion that wheat, bran, shorts and middlings should, without delay, be placed on the free list."

The Liberal party supported this resolution but it was defeated by a straight Conservative vote.

It is evident, then, that the present Government is allied with the "Big Interests" would do so even for greater production for the war sacrifice one job, the strangle hold that the "Big Interests" have upon the farmers' business—not assist in the way the great farmers' organizations felt best for Canada in increasing production and decreasing the ever-increasing cost of existence. Be not deceived by the cheap cry of patriotism. Learn the facts—weigh them in your own judgment. In being true to your democratic principles, you are not only working in the best interests of Canada, but are doing your noblest work "Where England's need is greatest." The supreme test of loyalty is service and sacrifice where most needed.

England needs most — NOT MEN — BUT FOOD — MORE FOOD — AND STILL MORE FOOD.

NOTE FOR THE FARMERS' INTERESTS

VOTE FOR LIBERALISM VOTE FOR LAURIER

(Advertisement supplied by the Central Liberal Information Bureau, Ottawa.)

THE NATIONAL POLITICAL PLATFORM OF THE CANADIAN COUNCIL OF AGRICULTURE.

THEREFORE, BE IT RESOLVED THAT THE CANADIAN COUNCIL OF AGRICULTURE, representing the organized farmers of Canada, urges that as a means of bringing about these much needed reforms and at the same time reducing the high cost of living, now proving such a burden on the people of Canada, our tariff laws should be amended as follows:—

1. By reducing the customs duty on goods imported from Great Britain to one half the rates charged under the general tariff and that further gradual, uniform reductions be made in the remaining tariff on British imports that will ensure complete free trade between Great Britain and Canada in five years.

2. That the Reciprocity Agreement of 1911, which still remains on the United States statute book, be accepted by the Parliament of Canada.

3. That all food stuffs not included in the Reciprocity Agreement be placed on the free list.

4. That agricultural implements, farm machinery, vehicles, fertilizers, coal, lumber, cement, illuminating fuel and lubricating oils be placed on the free list.

5. That the customs tariff on all the necessities of life be materially reduced.

6. That all tariff concessions granted to other countries be immediately extended to Great Britain.

POLICY OF THE WESTERN LIBERAL PARTY AS PASSED AT THE WINNIPEG CONVENTION, AUG., 1917.

Moved by Roderick McKenzie, a member of the Manitoba Grain Growers' Association, seconded by D. W. Warner, Saskatchewan:—

Resolved:

1. That the British Preference be increased to fifty per cent. of the general tariff, with a view to ultimate free trade.

2. That wheat, wheat flour and all other products of wheat, be placed upon the free list.

3. That the following articles be placed on the free list:—

(1) Farm implements and machinery with repairs for same;

(2) Farm tractors and internal combustion engines with repairs for same;

(3) Mining, flour, saw-mill, and logging machinery with repairs for same;

(4) Rough and partly dressed lumber;

(5) Illuminating, lubricating and fuel oils;

(6) Cement;

(7) Fertilizers;

(8) Fishing lines, cordage, swivels and metals for fishing spoons.

4. That fruit, staple foods and food products (other than wheat flour), domestic animals and food therefor, including oats, barley, and flax, be admitted into Canada free of duty when coming from and being the product of any country admitting like Canadian articles into such country free of duty.

5. That substantial reductions be made in the general tariff on all articles imported into Canada excepting luxuries.

Now for the Local Grist Mill
Editor of Farm and Dairy: With the high price of wheat and flour, which promises to remain so for some time, and the stimulus to wheat growing all over the country, what is wanted now is the revival of the local custom grist mills.

Not so many years ago every small stream had its grist mill. These fine water powers, so numerous all over the country, should again be harnessed up. There are other grains besides wheat that might be ground at these local custom mills. Barley, buckwheat and oats could be ground, as in the old days, and used in admixture with wheat flour, as now obtains in England, or used by itself. Barley meal cakes, oat cakes, and buckwheat pancakes are not forgotten by very many of your old readers. Barley brood and milk make a very appetizing supper. As things now are there

Representative Wanted Good Salary Paid

We are looking for several men to become permanent district representatives for Farm and Dairy in various parts of Ontario and Quebec.

Each man will be paid an excellent salary; also a good commission in addition on all business turned in. As the nature of the work involves the handling of considerable sums of money for us, we expect each man to be prepared to give us a bond or security for a reasonable amount.

Applicants are also requested to furnish three or four testimonials as to character and integrity, from responsible men.

Representatives will be given exclusive territory, consisting of several counties.

The work will consist of securing new readers for Farm and Dairy among the farmers; also getting renewals of present subscriptions.

The district representative will be permitted to appoint local agents in the territory wherever he sees fit, and on all business turned in by these local agents, the district representative will receive a commission.

A member of the regular staff of Farm and Dairy will accompany the district representative at first for the purpose of assisting him in getting started, and giving him suggestions and training in the best methods of business getting.

The men we engage as staff representatives will have permanent jobs, and the opportunity of themselves in their chosen territory.

Write us at once. You may be the man for your territory.

FARM AND DAIRY,
 PETERBORO, ONT.

is no means of grinding any of these grains. The big mills only manufacture white flour, and there are no local mills to grind anything. These big mills, while they turn out very white flour, do not make a healthy article of diet. The most nutritive parts are a by-product in the bran and middlings. The dark parts of the wheat which the millers eliminate, are the most nutritive parts. We have so accustomed ourselves to using nothing but very white flour that we think dark flour obnoxious. This is a great mistake.

With local custom mills plentiful throughout the country we would have plenty of bran and shorts for feed, and at first hands. The price of these feeds from the big mills is prohibitive.

Now for a boom for the local grist mill, and when this is started, let the farmers support it to a man. Steam or gasoline need not be used

for power; there are plenty of water powers going to waste.—J. A. Macdonald, Prince Co., P.E.I.

Molasses for Dairy Cows

ONE of the most successful feeders of dairy cows in this section an Englishman, is very strong on molasses meal, feeding one to two tons every winter. I would like your expert opinion as to the value of molasses meal for dairy cows. When should it be fed, in what quantities and how?—A. McK., Dundas Co., Ont.

It is doubtful in my mind if molasses can be fed profitably to dairy cows at present prices. When molasses was considerably cheaper a large amount of experimental work was conducted on the Experimental Farm system to demonstrate the value of this material compared with standard meals in the feeding of dairy and beef cattle. Valuing molasses at \$22 per ton and molasses meals, which at the same time could be procured at from \$32 to \$38 per ton, and comparing these with a good grain mixture composed of bran two parts, gluten feed one part and linseed oil meal one part, which mixture was then worth \$25 per ton plus the cost of mixing, the following facts were demonstrated in the feeding of dairy cows. Molasses can be fed profitably exceeding more than 10 per cent. replacement of the grain ration molasses at the above price was not profitable. However, whenever the roughages or the meals were decidedly unpalatable, molasses acquired a considerably higher value than otherwise. Occasionally, also, a cow on test or a cow lacking appetite can profitably be fed on a limited quantity of this feed. Molasses in its crude form, although decidedly cheaper than in the meal, is rather difficult to handle, especially in winter months, and is always difficult to properly mix with either the grains or the roughages. Of the molasses meals tried in this experiment, Caldwell's molasses meal showed a distinct superiority, due probably to the lack of fermentation in the bags when being stored for a considerable time or in long transit. However, all these meals did not show as great production nor as great gain as the feeding molasses mixed with the feeds in the stable.—E. S. A.

Endorses 300 Day Test

EDITOR Farm and Dairy.—I was much interested in the open discussion, in Farm and Dairy, by Avyshire breeders, on the value of 300 day tests instead of the present yearling one.

From an R.O.P. standpoint, I consider the present 365 day test absolutely unsound, and this should be made a 10 month test with cows to calve within the 13 months. For the most profitable results in dairying a cow should calve every 12 months, so that allowing cows to run 15 months (which is necessary to compete for the highest records), is very costly, besides throwing cows into a more inconvenient date for freshening.

Many farmers now run their cows through the tests on the 10 months milking with a calf in 12 months, and it would be a great advantage to have the change made, and which I think would meet with general satisfaction, except possibly from a few very large breeders. These might have the option of sending in their 365 day test the same as previously if thought advisable.

Hoping you may have a general discussion on this question and that your paper may take a strong stand for a 13 month R.O.P. test for the advancement of sound breeding methods.—L. F. Solly, Lakewood Farm, Westholme, B. C.



Health and Strength
 — OF —
 Your Herd is Vital

The best results are
 obtained by feeding

**LIVINGSTON
 BRAND**

Oil Cake Meal

It is Pure in Quality and Wholly Digestible
 If Your Dealer Cannot Supply You

Write Us

The Dominion Linseed Oil Co.

LIMITED

Baden, Ont.

Montreal, Que.



**Food
 Control'er
 Hanna
 Insists**

**"That the Spread Between the Producer
 and the Consumer Must be Reduced."**

We agree with him. In other words, he means cut down the enormous difference—the ridiculous difference—between what the farmer gets for his produce and what the ultimate consumer pays.

PURCHASERS OF KEITH'S SEEDS save the middleman's profit and save the freight.

We buy seed direct from growers in enormous quantities and sell direct to farmers at the lowest prices in Canada.

You Save the Spread

Get our catalogue, compare our prices with the prices in any other catalogue. Judge for yourselves. Our 52 years of service stands behind the quality of our seeds. All seeds tested for germination.

Write for 1918 Catalogue To-day

**GEO. KEITH & SONS
 SEEDS**

**124 KING ST. E.
 TORONTO**

Farmers of Canada Make 1918 Your Greatest Year

Gather Information About--

- | | |
|--|--|
| The best varieties of Grains and Roots; | Best orchard methods; |
| The most profitable breeds of Cattle, Sheep,
Swine and Poultry; | Production of finest Honey; |
| The manufacture of highest quality Butter
and Cheese; | Farm tractors, gasoline engines and motors;
Reclaiming land by underdrainage;
Business management on the farm. |

FREE SHORT COURSES

AT THE

Ontario Agricultural College GUELPH

The College charges nothing for this instruction. It is absolutely free and the only expense you have to meet is board while in Guelph and railway fare at reduced rates.

STOCK AND SEED JUDGING—(2 weeks) Jan. 8th to 19th. This course is particularly intended for farmers and farmers' sons who are engaged in mixed farming. The college has the finest equipment for instruction in the care and handling of stock and the determination of the best varieties of grains, roots and fodder plants. Besides the college herd, animals are brought in from the farms of prominent breeders, and some excellent stock is used in the demonstrations. A number of fat cattle, sheep and hogs are slaughtered after dressing percentages are estimated by the class, in order to demonstrate the qualities desired in good carcasses and to illustrate the relative value of parts. Lectures are given on breeding, feeding and management and common diseases of stock. The work in seed judging covers a period of 2 1/2 hours each day. Some of the special points discussed are purity, germination, cleaning, varieties of all farm crops; identification of weed seeds; eradication of weeds.

POULTRY RAISING—(4 weeks) Jan. 8th to Feb. 2nd. This course is open for women as well as men. The poultry industry in Ontario is an extensive one, and for a number of years this course has been offered at the college. Poultry raising is one branch of agriculture where much money can be lost unless one knows the business thoroughly. All the problems of the poultry keeper are considered. Students get practice in building poultry houses; feeding laying hens; fattening; dressing; operating incubators; handling, etc. The lectures include instruction in breeds and varieties of fowls; principles of breeding; hatching; hatching and rearing; feeds and feeding and other interesting subjects. Accommodation for this class is limited, and applications should be made early.

HORTICULTURE—(6 weeks) Jan. 21st to Mar. 2nd. This year the course in horticulture

is so arranged that one may obtain a complete course in fruit growing during the first two weeks, vegetable growing the third and fourth weeks, and floriculture and landscape gardening the last two weeks. The following points in fruit growing receive special attention—soil, varieties, nursery stock, sprays, fertilizers, pruning and marketing. The instruction in vegetable growing and floriculture includes both commercial and amateur gardening. Landscape gardening is confined to the beautifying of home and school grounds, roadside planting, rough sketches and plan drawing.

THE DAIRY COURSE—The Factory Dairy Course (3 months), Jan. 2nd to Mar. 2nd, prepares young men for positions as managers of cheese factories and creameries. There is a constant demand for men thoroughly equipped in the science and practice of dairying. The dairy is furnished with all modern appliances, a good dairy herd is maintained, and this course is a splendid opportunity for young men interested in the dairy business.

THE FARM DAIRY COURSE, from Jan. 21st to Feb. 16th, commences after the Stock and Seed Judging Course is completed, giving opportunity to students of that course to obtain instruction in the best dairying practices for the farm. In this course only modern machinery is used. Students who cannot remain for the entire course may stay one week or less.

Courses are also given in Cow Testing, March 15th to April 3rd; Ice Cream Making, March 16th to March 30th, and Soft Cheese Making, March 25th to March 30th.

BEEKEEPING—(3 weeks) Jan. 8th to Jan. 25th. The instruction during the first week of this course is elementary, the following two weeks being more advanced. The morning lectures include methods of management throughout the season; bee diseases; re-queening, etc. The afternoon practical

work is devoted to preparation of supplies for the summer; wax rendering, and other practical work which can be done during the winter.

Much of the instruction in beekeeping cannot be done in the winter, and for this reason a summer course is offered during the second week of June, when the practical handling of bees is featured.

DRAINAGE AND DRAINAGE SURVEYING—(2 weeks) Jan. 8th to Jan. 19th. Thousands of acres of low-lying land in Ontario may be reclaimed by a little underdrainage, and this course gives enough instruction so that any farmer may do his own surveying, ditching and laying of tile. Instruction in the use of ditching machinery is a strong feature of the course, and some attention is given to the construction and care of gasoline engines.

FARM POWER, including Farm Tractors, Gasoline Engines, Motors, etc.—(2 weeks) Jan. 21st to Feb. 2nd. During the past summer there was a special demand for men who could properly operate farm tractors, and some difficulty was experienced in obtaining men with the necessary experience. This course is planned to give a thorough course in tractors and all other power on the farm, including gasoline engines, electric motors, etc.

BUSINESS AND MARKETING—(2 weeks) Jan. 8th to 19th. The lectures of this course are given in the evening only, in order that students attending all the courses commencing on Jan. 8th might attend. The necessity of good business management in farming is being more widely recognized each year, and this course is intended to give some suggestions and assistance to the farmers of the province in working out their own business problems. Bookkeeping, banking, organization of cooperative societies and marketing are some of the principal features.

These short courses are for the special benefit of farmers and farmers' sons who find it impossible to attend college except for short periods in the winter

An illustrated Short Course Calendar giving in detail all short courses will be mailed on request.

G. C. CREELMAN,
President



Farm and Dairy

AND

Rural Home

"The Farm Paper for the farmer who milks cows."
Published Every Thursday by
The Rural Publishing Company, Limited
Peterboro and Toronto.

47

SUBSCRIPTION PRICE, \$1.00 a year. Great Britain, \$1.50 a year. For all countries except Canada and Great Britain, add 50c for postage.
ADVERTISING RATES, 12 cents a line flat, \$1.00 an inch an insertion. One page 48 inches, one column 12 inches. Copy received up to Saturday preceding the following week's issue.

Peterboro Office—Hunter and Water Streets.
Toronto Office—37 McCall Street.

United States Representatives:
Stockwell's Special Agency.

Chicago Office—Coca-Cola Building.
New York Office—Tribune Building.

CIRCULATION STATEMENT.

The paid subscriptions to Farm and Dairy approximate 20,000. The actual circulation of each issue, including copies of the paper sent to subscribers who are but not paid for, and sample copies, varies from 20,000 to 22,000 copies. No subscriptions are accepted at less than the full subscription rates. Frequent detailed statements of circulation of the paper, showing its distribution by counties and provinces, will be mailed free on request.

OUR GUARANTEE.

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

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

The Rural Publishing Company, Ltd. PETERBORO AND TORONTO

"Read not to contradict and to confute, nor to believe and take for granted, but to weigh and consider."—Bacon.

Producers Will be Exempt

FARMERS in Brant and Norfolk counties, to the number of 790, have signed a petition protesting against the manner in which farmers' sons and hired help have been refused exemption by a tribunal in the city of Brantford. Farmers in Lanark and Peterboro counties have similarly protested. Many other districts that have made no formal protest are just as dissatisfied with tribunals' decisions. A letter to Farm and Dairy from a correspondent in Western Canada, who is closely in touch with the situation there, states that scores of tribunals seem to have no conception of the dangers that threaten if food production is reduced, and are robbing farms of their last laborer. The prairies, he writes, are "seething with discontent." Probably it was with a knowledge of these conditions that the Minister of Militia made the following statement in a public address last week:

"It was impossible in the operation of the Military Service Act to say all farmers' sons would be exempt, and I don't believe the farmers wanted that," said General Newburn. "The farmer must understand that if he has three or four boys, and they are not all raising farm produce, they should not all be exempt. Farmers' sons who have been in the city for three or four years, or more, working in the city, and never intending to go back to the farm, should not be exempt, but if they are farmers' sons who are honestly engaged in the production of foodstuffs, they will be exempt from military service, and if I continue to be Minister of Militia, I will give you my word that if any farmers' sons who are honestly engaged in farm work and in the production of

foodstuffs, if they are not exempted by the tribunals and are called up for military service, I will have them honorably discharged from the Canadian Expeditionary Force, provided they go back to the farm, because it is very important at the present time that we should increase our production of foodstuffs."

General Newburn is right. Farmers are not demanding special consideration. But while we are being urged to increase our production as a national necessity, we have a right to demand that necessary skilled labor be left with us. Farm and Dairy does not believe it to be the Government's intention that farms should be denuded of labor, and, with General Newburn's assurance of favorable consideration, we would advise all farmers' sons who are needed at home to maintain production at its present volume to appeal their cases when exemption is refused. The Government desires that they should do so.

Our Live Stock Commissioner

H. S. ARKELL, B.S.A., has recently been appointed Live Stock Commissioner for Canada. For eight years Mr. Arkell has been connected with the Live Stock Branch as chief assistant, and since the death of the late Commissioner, Mr. John Bright, has been Acting Commissioner. Farm and Dairy is glad to welcome Mr. Arkell into the full honors of an office of which he has been the real and directing head for several years.

Our new Commissioner possesses in large degree the qualifications that we have a right to expect in the head of this important branch of the Department's work. Not the least of his qualifications is that he is a farmer born and bred, the Arkells having a continental reputation as sheep breeders. H. S. Arkell received his education at Toronto University and the Ontario Agricultural College. For a year after leaving Guelph, in 1904, he served on the staff of the Ohio State Agricultural College, and then returned to be assistant to Prof. Geo. E. Day at Guelph. From there he went to Ottawa as assistant to Dr. J. B. Rutherford. In the years that he has been in the Dominion service, Mr. Arkell has been close in touch with every phase of the live stock industry in Canada, and has also been afforded an opportunity to study the industry in the older lands of Europe. The close interest that he has always taken in the farmer's marketing problem, and the marketing service that he has already organized in connection with the Live Stock Branch, lead us to believe that further reforms along this line will be instituted by the new Commissioner. Mr. Arkell has happened on the office in difficult and tumultuous times, but Farm and Dairy is confident in his ability to maintain and extend the usefulness of his department and also to hold the confidence of the live stock men of Canada, who, one and all, are gratified at his appointment.

Quit Guessing and Test

SO you think you can judge of a cow's milking ability just by looking her over? Of the 1,600 people who passed their judgment on eight grade cows shown at five Massachusetts fairs last year, probably the great majority were certain of their ability to pick a good cow when they saw one. And yet of the whole 1,600 of them, only twenty-nine per cent. picked the highest producer, and five per cent. of them thought her to be the lowest producer. Only twenty-six per cent. selected the right cow as the lowest producer, and eight per cent. were quite confident that she was the highest.

Most of the men who were asked to place these cows were cow owners; yet only a little over twenty-five per cent. of them were able to distinguish between cows which showed a variation

of 2,000 to 5,000 pounds of milk in a year, and the number of fair visitors who were able to place all the cows even approximately correct, were a negligible quantity. The moral is: "Quit guessing and test."

The Necessary Foodstuffs

ONLY two foodstuffs are of real vital importance in the menus of the Allied nations—wheat and meat. Europe must have both, and have them in great quantities. On her own farms she can produce only a limited proportion of her total requirements. The rest must come from the farms of America.

America, it is true, is not the only continent with a surplus of wheat. The food controllers of the United States and Canada estimate that, at the present time, the world's wheat surplus amounts to 770,000,000 bushels. Of this quantity, however, 540,000,000 bushels are in India and Australia. The shortage of ships is so great that neither the Indian nor the Australian crop will be moved for many months to come; a ship can make three trips between Halifax or New York and Liverpool in the time required to make one trip from Melbourne to Liverpool. The needs of Great Britain, France, Italy and Greece are estimated at 577,000,000 bushels of wheat. Our surplus is 230,000,000 bushels. The deficiency is great, and these are conservative figures. Greater wheat production, therefore, is one of the problems of the American farmer.

And Europe needs meat. Perhaps we had better say pork, as this is the only kind of meat that can be produced in sufficient quantities at an early enough date to affect the situation. Every extra sow bred on our farms is an important item in the feeding of the nations. The price outlook is good. Many factors are contributing to upholding the market. And let us not forget that the national need is very, very great.

The American farmer, the man who tills the land of the United States and Canada, has a big job cut out for him between now and the end of 1918. To accomplish it, he will need the sympathy and support of every class in the community. In many cases he will need a supply of skilled labor and credit to finance his operations. Exhortation is not a substitute, for either.

Value of Skim Milk

Hoard's Dairyman.

A MAN who milks cows was recently asked what he considered a fair price for skim-milk to feed to pigs and calves. His reply shocked those who heard it. After some hesitation he said: "Well, I think skim-milk is worth about 10 cents per hundred."

This man is a very poor student of his business and it is puzzling to understand how he gets along. Skim-milk worth 10 cents a hundred when hogs are selling at \$17 to \$18 per hundred and old corn at \$2 per bushel and new corn at \$1.25 or more! There are creameries paying farmers 75 cents a hundred for skim-milk. Actual pig feeding tests have proved 100 lbs. of skim-milk equal to one-half bushel of corn when fed at the rate of 3 lbs. of skim-milk to one pound of corn. The present price of grade dairy calves will return over a dollar per hundred for all the skim-milk fed to them.

Skim-milk alone is not a satisfactory ration for the pig, but corn and skim-milk make an ideal ration. The skim-milk supplies elements which the corn lacks and greater growth is produced than when only one of these feeds is fed. In other words, when skim-milk is fed, corn produces more pork.

It is hard to understand how any man capable of operating a farm could be so ignorant as to the feeding value of skim-milk.

Letters to the Editor

A Letter of Protest

EDITOR, Farm and Dairy.—You speak of man power for the farms to supply food. How is the farmer to keep up production when city tribunals are taking the only sons from aged fathers? How are these men to get in their spring crop? We could not get a man or boy last spring and what will be done next year? Cannot something be done to stop this before it goes any further? I believe that two thirds should be left on 100 acres, as one man cannot work 100 acres as farms are worked on Prince Edward Island. Last spring there were women and children helping to put the crops in, who, when they would go to the city, would see men and women in their autos on pleasure bent.

It has been suggested that city boys take the farmer boys' places. It would take more time to teach city youths to do farm work than to do it ourselves. Try and do all in your power to get country tribunals. They will be better able to judge than city men who know nothing about farm work. Farm work is not like office work. The farmer goes to work at five a.m., the office man at nine o'clock. The office man may quit at three, but the farmer keeps on till nine p.m., and sometimes till ten o'clock when very busy.—"A Prince Edward Island Farmer."

Dividends 24 p.c. or 80 p.c.

EDITOR Farm and Dairy: I see by your paper that millers are to be allowed 25 cts. a barrel profit on flour, and that the packers are to get from seven to 15 per cent., but I do not see anything regarding the cut on farm profits. Now, if we can believe all the accounts in Government bulletins, city papers, and also many agricultural papers, this is great neglect, as according to these accounts the farmer is the greatest profit producer of them all.

But are they correct? Apparently it is a part of a concerted plan to stir up strife between the city men and the farmer in the hope of reducing the prices to the farmer. If this practice is continued, it will only result in still higher prices, as, owing to small returns, which do not justify the present high price of labor, the situation for 1918 is very serious indeed. Give the farmer some guarantee, and he, will produce the foodstuffs.

Farming at the present time is not prosperous. I do not know of one who would not be willing to sign an agreement to raise his farm for reasonable wages, depreciation, insurance, taxes, etc. Not the same expenses the millers and packers will put on, but very much smaller; and 24 per cent. on investment, or just one-half the interest of war bonds. This would be in many cases more than he is making at present for, as one progressive farmer, salesman for a large cooperative farmers' live stock company, said: "You cannot have both wages and interest. If you take out wages you have no interest, and if you charge for interest on investment there is nothing left for wages for yourself."

"The farmers are willing to show their patriotism, and most of them would work for wages alone while the war lasts."

With regard to myself I have just \$4,000 in stock and implements, and would be satisfied, during the duration of the war, if I could get rent for farm depreciation, insurance, nothing for interest on money invested, and one-half the salary, which included all

expenses, that I have been making for the past five or six years in commercial work connected with agriculture. Let us hear how far our business men will cut their profits. Will they cut to the farmer's 2 1/2 per cent., or do they want the 80 per cent. of the Sir Knights of the Bacon Trade? G. P. Marsh, Gray Co., Ont.

System Needed in Colonizing

EDITOR Farm and Dairy: Cannot the Government devise some scheme for controlling land settlement whereby settlers in a new country could be located in communities? The method of land settlement which obtains in New Ontario at least, is to throw open a dozen or more townships for settlement at once. Settlers come into the country, locate on a farm somewhere along the railway line, or perhaps buy their farms from the Department of Colonization without finding out exactly where they are. The result of such indiscriminate settlement of lands in this district is that many settlers are located with no clearing within 15 or 20 miles of them in any direction.

The greatest drawback to rapid settlement in Northern Ontario is the fear of forest fires. And until some effort is made on the part of the Department of Colonization to locate the settlers in groups or communities, the danger of forest fires will be a very real one indeed to the settler. Where any considerable number of settlers have located together, however, there is soon a large enough cleared area to provide safety in time of stress.

It is only when a number of settlers locate together in one community that they can have decent roads, or the benefit of church, school and store. Community settlements are essential throughout this country in the drainage of land, in opening up the country to the sun, and in maturing the climate sufficiently to ripen grain crops. Everyone concerned would be benefited if the government were to open but one township at a time and fill that up with settlers before opening up another. It is only in this way that permanent settlement will be attained.—Subscriber, Hearst, Ont.

Railway Taxation in Canada

EDITOR Farm and Dairy.—The exemption of the railways of Canada from a fair share of our burdens of taxation shows how the railway barons have controlled legislation in their own interests. In 1915-16 our railways paid a total of three million dollars in taxes, or 186 per mile. The rate was less than two mills on the dollar, while farm property paid ten mills. Canadian railways have 298 miles of lines in the States on which the taxes paid was \$500 per mile. The C. P. R. paid \$100 per mile in Canada, and \$500 per mile in the States. The G. T. R. paid \$180 per mile in Canada, and \$1,200 per mile in the States. One-half of the St. Clair Tunnel paid \$964 in Ontario and the other half \$300,000 in Michigan. In Michigan \$20,000 miles of railway paid in taxes in 1909-10, which is \$1,200,000 more than was paid by all the railways in Canada, and yet passenger and freight rates are lower in Michigan than they are here. Parlor and sleeping cars paid \$2,200 taxes in Ontario, and \$12,500 in Michigan. Car loaning companies paid nothing in Ontario, and \$27,000 in Michigan.—H. J. Pettypiece, Forest, Ont.

The show ring and the official test are the great criterions of dairy advancement. Both speak well for the progress that is being made by breeders of dairy cattle for



Don't wait till next spring to get your new

DE LAVAL

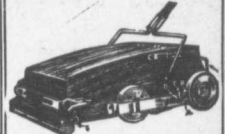
With butter prices soaring no cream producer can afford to go another season without a New De Laval Cream Separator.

This is true whether you have no separator, or an inferior or half-worn-out machine, or even an old style De Laval.

In cold weather your waste of butter-fat is relatively great, either with gravity skimming or a poor separator, and at present prices for cream a De Laval would very soon pay for itself out of its own savings.

See the nearest De Laval agent right away and let him show you what the De Laval will save for you. If you do not know the local De Laval agent, write direct for any desired information.

The De Laval Company, Ltd.
MONTREAL PETERBORO
WINNIPEG VANCOUVER



Keep the Home Sweet and Clean

with a
KEYSTONE
Combination
Vacuum Sweeper

A carpet-sweeper and vacuum cleaner all in one. There will be no need of yearly or half-yearly carpet beating "bees". If you use a Keystone. The dust and dirt is completely removed every time you sweep—not just once or twice a year. And there is no dusting to do afterward. You can get one of the Keystone Combination Vacuum-sweepers absolutely

FREE TO YOU

Just tell a few of your neighbors about Farm and Dairy. Get their subscriptions at \$1.00 a year each. Send us seven new subscriptions and we will send you the sweeper at once, FREE of all cost to you. Try for those subscriptions to-day and see how easy it is. Get them by telephone or personal visit, and send them to:

The Circulation Department
FARM AND DAIRY,
PETERBORO, - - - Ont.

Get Your Horses in Condition to Command the Top Prices

HORSES never have been so much in demand as they are to-day, but buyers are only interested in sound horses—sound horses being good money. It will be money in your pocket to keep your horses in good condition, and if any are lame or blemished get them sound NOW!

My booklet, "How to Remove Blemishes," is free for the asking. It recommends ABSORBINE—Absorbine, because this is the famous preparation that I have been making for about a quarter of a century, and I believe it is the safest and most effectual liniment you can use.

ABSORBINE is safe and pleasant to use—it is made of herbs, and does not blister or remove the hair—horses can be used while being treated. In addition to being a liniment it is a powerful antiseptic and germicide, which doubles its efficiency and use. Applied to sores, cuts and boot chafes it prevents infection, kills the germs and promotes rapid healing.

ABSORBINE is economical, as only a few drops are required at each application. One ounce of ABSORBINE added to a quart of water or witch hazel makes a good antiseptic, general purpose liniment.

USE ABSORBINE

to reduce Bursal Enlargements, Bog Spavins, Thoroughpins, Puffs, Shoe Boils, Carped Hocks, Swollen Glands, Inflamed Parts, Thickened Tissues, Rheumatic Deposits, Enlarged Veins, Painful Swellings and Affections; to reduce any strain or lameness; to repair strained, or ruptured tendons, ligaments or muscles, to strengthen any part that needs it.

Your druggist can supply you with Absorbine or I will send you a bottle postpaid for \$2.00. Write me if you have a case requiring special directions or about which you would like information.

Made in Canada by

W. F. Young, P.D.F., 123 Lyman Bldg., Montreal, Can.





HERE is a better thing than the observance of Christmas and that is keeping Christmas—Henry Van Dyke.

The Heart of the Desert

(Continued from last week.)

"HUSH!" whispered Rhoda, with a tender smile. "Some one is coming through the orchard." DeWitt reluctantly released the slender hands and leaned back in his chair. The sun had crossed the peach orchard slowly, breathlessly. It cast long, slanting shadows along the beautiful alfalfa fields and turned the willows by the irrigating ditch to a rosy gray. As the sun sank, song-birds piped and lizards scuttled along the porch rail. The lowliest part of the New Mexican day had come.

The two young Northerners watched the man who was swinging through the orchard. It was Cartwells. Despite his breadth of shoulder, the young Indian looked slender, though it was evident that only panther strength could produce such panther grace. He crossed the lawn and stood at the foot of the steps; one hand crushed his soft hat against his hip, and the sun turned his close-cropped black hair to blue bronze. For an instant none of the three spoke. It was as if each felt the import of this meeting which was to be continued through such strange vicissitudes. Cartwells, however, was not looking at DeWitt but at Rhoda, and she returned his gaze with a look at the beauty of his face, with its large, lone-lashed, Mohave eyes that were set well apart and set deeply as are the eyes of those whose ancestors have lived much in the open plain of the sun; with straight, chin-bridged nose; with the stern, cleanly modeled mouth and the aquate chin, below. And looking into the young Indian's deep black eyes, Rhoda felt within herself a strange stirring that for a second veiled the languor from her eyes.

Cartwells spoke first, easily, in the quiet, well-modulated voice of the Indian.

"Hello! All safe, I see! Mr. Newman will be here shortly." He seated himself on the upper step with his back against a pillar and fanned himself with his hat. "Jack's working too hard. I want him to go in the coast for a while and let me run the ditch. But he won't. He's as pious-headed as a Mohave."

"Are the Mohaves so pie-headed then?" asked DeWitt smiling.

Cartwells returned the smile with a flash of white teeth.

"You bet they are! My mother was part Mohave and she used to say that being as stiff-necked as youces, you're all over the wilderness, Miss Tuttle!"

"Yes," said Rhoda. "You were very good to me."

Cartwells shook his head.

"I'm afraid I can't take special credit for that. Will you two ride to the ditch with me to-morrow? I think

Miss Tuttle will be interested in Jack's irrigation dream, don't you, Mr. DeWitt?"

DeWitt answered a little stiffly. "It's out of the question for Miss Tuttle to attempt such a trip, thank you."

But to her own as well as DeWitt's astonishment Rhoda spoke protestingly.

"You must let me refuse my own

to the loveliness of which Rhoda's frigid never could accustom themselves. At the sight of it, Cartwells drew a deep breath, then leaned toward her and spoke with curious earnestness.

"You make me feel the same way that starlight on the desert makes me feel."

Rhoda replied in astonishment, "Why, you mustn't speak that way to me. It's not—not—"

"Not conventional?" suggested Cartwells. "What difference does that make, between you and me?"

Again came the strange stirring in Rhoda in response to Cartwells' gaze. He was looking at her with something of tragedy in the dark young eyes, something of sternness and determination in the clean-cut lips. Rhoda wondered, afterward, what would have been said if Katherine had not chosen this moment to come out on the porch.

"Rhoda," she asked, "do you feel like dressing for dinner? Hello, Kut-le, it's time you moved toward soap and water, seems to me!"

"Yesum!" replied Cartwells meekly. He rose and helped Rhoda from the hammock, then held the door open for her. DeWitt and Newman emerged from the orchard as he crossed to Katherine's chair.

CHRISTMAS, 1917

HARK how the Christmas bells ring out!
They tell of love and peace
And children's voices sing and shout
For very happiness.

For late last night, a visitor,
(While all in slumber lay)
A jolly elf with cap of fur,
Came driving 'round this way.

In every stocking hung in sight
He placed his gifts with care,
In memory of the Nativity Light,
He left beyond compare.

How brightly gleams, to-day, the sun
On freshly fallen snow,
As speed the sleds (what heaps of fun)
From hill to depths below.

Oh, gladsome day! What joy you bring,
A great by year you come!
The hearts of loving parents sing,
As children gather home!

E'en on the muddy battle-field
A Presence hovers near,
To Christ their King the meek and lowly
One knelt.

And He is every year,
As angel songs on that glad night
Proclaimed the babe new-born
Through war's dark cloud there breaks
A light.

A greater Christmas morn.
With glory shall He come again,
This gentle babe, a King,
And over all the earth His reign
A lasting peace shall bring.
—S. R. N. Hodgins.

invitations, John. Perhaps the ditch would interest me."

DeWitt replied hastily, "Good gracious, Rhoda! If anything will interest you, don't let me interfere."

There was protest in his voice against Rhoda's being interested in an Indian's suggestion. Both Rhoda and Cartwells felt this and there was an awkward pause. This was broken by a faint halloo from the corral and DeWitt rose abruptly.

"I'll go down and meet Jack," he said.

"We'll do a lot of stunts if you're willing," Cartwells said serenely, his eyes following DeWitt's broad back inscrutably. "The desert is like a story-book if one learns to read it. If you would be interested to learn, I would be keen to teach you."

Rhoda's gray eyes lifted to the young man's somberly.

"You too dull these days to learn anything," she said. "But I—I didn't use to be! Truly I didn't! I used to be so alive, so strong! I believed in everything, myself most of all! Truly I did!" She raised, wondering at her lack of reticence.

Cartwells, however, was looking at her with something in his gaze so quietly understanding that Rhoda smiled. It was a slow smile that lifted and deepened the corners of Rhoda's lips, that darkened her gray eyes to black, an unforgettable smile

"Is she very sick, Mrs. Jack?" he asked.

Katherine nodded soberly.

"Desperately sick. Her father and mother were killed in a railroad wreck a year ago. Rhoda wasn't seriously hurt but she has never gotten over the shock. She has been falling ever since. The doctor feared consumption and sent her down here. But she's just dying by inches. Oh, but she's too awful! I can't believe it! I can't realize it!"

Cartwells stood in silence for a moment, his lips compressed, his eyes inscrutable.

Then "I've met her at last," he said. "It makes me believe in Fate."

Katherine's pretty lips parted in amazement.

"Goodness! Are you often taken this way?" she gasped.

"Never before!" replied Cartwells severely. "Jack said she'd broken her engagement to DeWitt because of her illness, so it's a fair war!"

"Kut-le!" exclaimed Katherine. "Don't talk like a yellow-backed novel! It's not a life or death affair."

"You can't tell as to that," answered Cartwells with a curious little smile. "You mustn't forget that I'm an Indian."

And he turned to greet the two men who were mounting the steps.

CHAPTER II

The Caucasian Way.

WHEN Rhoda entered the dining-room some of her pallor seemed to have left her. She was dressed in a new gown of an exquisite pink that gave a rose flush to the marble fineness of her face.

Katherine was chatting with a wiry, middle-aged man, whom she introduced to Rhoda as Mr. Porter, an Arizona mining man. "You're just as if stuned for a moment by Rhoda's delicate loveliness. Then, as was the custom of every man who met Rhoda, he looked vaguely about for something to do for her." Jack Newman forestalled him by taking Rhoda's hand and leading her to the table. Jack's curly blond hair looked almost white in contrast with his tanned face. He was not as tall as either Cartwells or DeWitt, but he was strong and clean-cut, and had a boyish look despite the heavy responsibilities of his five-thousand-acre ranch.

"There," he said, placing Rhoda beside Porter, "this Arthur Porter's scalp to your belt with the rest of your collection. It'll be a new experience to him. Don't be afraid, Porter."

Billy Porter was not in the least embarrassed.

"I've come too near to losing my scalp to the Anaschis to be scared by any little Arthur. Anyhow I gave her my scalp without a yelp the minute I laid eyes on her."

"Here! That's not fair!" cried John Newman, "my scalp of us had to work to get her to take ours!"

"Our what?" asked Cartwells, entering the room at the last word. He was looking very cool and well groomed in white flannels.

Billy Porter stared at the newcomer and drained his soup spoon with a snarl, "what in thunder!" Rhoda heard him mutter.

Jack Newman spoke hastily. "This is Mr. Cartwells, our irrigation engineer, Mr. Porter."

Porter responded to the young Indian's courteous bow with a smug nod, and proceeded with his soup.

"I'd as soon eat with a stranger as an Indian," he said to Rhoda under cover of some lazzing remark of Katherine's to Cartwells.

"He seems to be nice," said Rhoda vaguely. "Maybe, though, Katherine is a little liberal, making him one of the family."

"Is there any hunting at all in this open desert country?" asked Cartwells.

"I certainly hate to go back to New York with nothing but snappers to show for my season."

"Coyotes, wildcats, rabbits and porcupines," volunteered Cartwells, "know where there is a nest of quail, cats on the first mesa. And I know an Indian who will take the skin for you. The worst hawk-hunt I've yet well known is an exquisite thing, too, he says. I will go on a hunt with you whenever the ditch can be let."

"And while they are shooting snappers after Jack, Miss Tuttle, out to Billy Porter, really, I will take you anywhere you want to go. I'll show you things these kids never dreamed of."

I know this country in the days of Anaschis better than the boys here. I'll be first!" replied Rhoda.

"But I rather hate the snappers, they take many trips. Did you spend your boyhood in New Mexico? Did you see real Indian fights? Did you—?" She glanced with an involuntary glance at Cartwells.

(Continued on page 40.)

The Upward Look

Giving

IT is more blessed to give than to receive.—Acts 20: 35.

The main topics of every conversation now are Voters' Lists and Victory Loans. In regard to the latter the main thought in almost every mind is what can one give, and wondering what one's friend or neighbor is going to give.

In hearing the loan discussed, one point has both surprised and grieved me. This is, so many seem to be thinking, not how much the country needs this money, not how much sacrifice one can make to give as much as possible, but rather, is it a safe and sure investment? Will one be very likely to get one's money back? Can one draw it out whenever needed?

Is not this typical of so many, many in life; not what they can give out for others, but how much they can get for themselves.

What a false, wrong standard this is! It is wrong because so utterly contrary to Christ's teachings and examples, whose whole life thought was the giving of Himself for others. It is such a terrible mistake that all happiness-seekers are making. In searching for happiness they are trying to obtain it by having and holding and more having and holding, instead of giving up and giving and more giving up and giving. Poor, poor things! Possessions, wealth, honor, knowledge, will never bring the true happiness of soul-rest and peace, unless these can be utilized for the use and benefit of one's fellow men.

On the other hand, although one may have great difficulty in making ends meet, may never be distinguished in any way, or never have time nor opportunity to spend in study, yet in working and laboring for his own and for others, he is far richer than Croesus ever was.

Thus, being loyal and true to one's own highest standards and loyal and true in service for others, is the only safe investment, from which one is always getting sure returns and can draw them at any time.—L.H.N.

Save a Little

Louise E. Thayer.

CHRISTMAS time's a-comin' an' you better get in line; Look a bit more cheery as you give the countersign;

Make your handclasp warmer an' your smile a bit more bright—

When you celebrate on Christmas don't you want to do it right? Jes' go in to make things lively until everybody's glad;

Jes' go in and scatter sunshine; don't be gloomy like an' sad.

Make everybody happy—jes' as happy as can be—

But don't hang all your presents on the Christmas tree!

Save a little cheerfulness to scatter through the year;

Save a few kind words to say, such as dry the tear;

Save kind deeds to do when chance comes by an' by—

You can use a little Christmas if you have it next July!

Jes' show your friends you love 'em by the thoughtful gifts you give;

Let the warmth of your sincerity touch all with whom you live;

Till the grown folks chatter child-like in their pleasure and their glee;

But don't hang all your presents on the Christmas tree!

Save a few small tokens of the happy Christmastide;

Wrap them up in evergreen an' put them on one side.

You can use them later, an' they'll bring a thrill of cheer

To some heart that mourns in anguish that the world is cold and drear.

Jes, try this plan one Christmas an' you'll find more good is done

By sayin' cheer to scatter on the course the year must run.

Than by celebratin' Christmas without thoughts of days to be.

An' by hangin' all your presents on the Christmas tree!

Good Pictures Lend Inspiration

With the Household Editor.

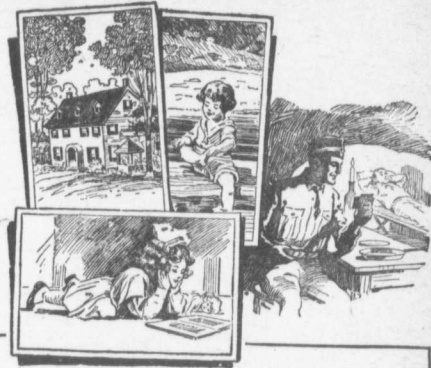
GOOD pictures carry with them an inspiration. Life is bound to become humdrum and monotonous at times and it is at such times most especially that we need something to lift us above our petty trials and cause us to catch a new vision of our life-work. A good picture hanging on the walls of our homes is a beauty spot, and it also helps to rest our minds and cheer our hearts.

To most people, it is a source of interest to view the pictures hanging on the walls of the homes we visit. And what a conglomeration of subjects we find at times! In some homes the pictures look as though they "came over in the Mayflower," were hung on the walls and have not been changed since. Parlors frequently contain enlarged pictures of ancestors of the family and in the dining room porcelaine there will be some old-time war scenes or an array of calendars. In all probability many of us who read this article, have been gully at one time, if not now, of having some such picture on our walls. If we so desire, however, we can profit by our mistake and set up our minds to enjoy good pictures and endeavor to add to our collection occasionally at least.

If we have enlarged photos of relatives, the proper place for them is in our own bedroom. They are of little interest to the visitor and it is so much more satisfying to have pictures in our living rooms that others as well as ourselves can enjoy. We should select our pictures also with the thought in mind of their influence on the members of the home, as well as for their beauty. It is poor policy to purchase a picture because it has a nice frame, or because it is expensive, without studying the picture itself. That is on much the same principle as having a book with a handsome binding, because it will look well on the parlor table, although we do not intend to read it.

Pictures which hang on the walls of our home should be of such a nature that we do not easily tire of them. They should express refinement as well as beauty, for anything that will add refinement to the home is worth while. The influence of pictures on the child mind is great and it is a good plan to have a number of simple, but sweet studies which we can hang on the rooms most used by the children. They can be taught through pictures to look for beauty in simple things, to be kind to animals, and to respect women, especially mother. Often pretty subjects for such pictures can be secured by using front covers of women's magazines.

Probably we who live on the farm find that it is rather difficult to secure good pictures. We may also be impressed with the fact that there are so many other things which we must have, that pictures are a luxury. Prints of well-known pictures, however, may be purchased at a low figure. Of course the higher price we can pay, the more attractive pictures we can secure. This is a time of year to buy pictures not only for our-



A Kodak for Christmas means pictures from home

Pictures of home scenes and home faces, intimate pictures that could only be made by his family and his friends, make the life the soldier left behind him seem very near—the next best thing to a furlough.

Your Christmas gift of a Kodak will make such pictures possible—and the very real pleasure that anyone can get out of making pictures the Kodak way will be multiplied a hundred fold when the soldier gets his set of prints, along with a cheerful letter, in the regimental mail.

It is a gift for the home folks with the soldier in mind.

Kodaks range in price from \$8.00 up, and although they differ in size and equipment, all have the distinctive Kodak characteristics of ease and simplicity of operation—any Kodak will make good pictures for anyone.

CANADIAN KODAK CO., Limited
Toronto, Canada



THE INTELLIGENT BUYER

will not fail to get full information from every available source. Only by doing so can we purchase to the best advantage. Not only do we require to know where we can secure the greatest choice, but reliability in the goods offered is one of the first essentials. You can depend upon the advertisers who use the columns of Farm and Dairy. They have our confidence. We recommend them to you. In writing for catalogues, etc., mention FARM and DAIRY. It will identify you.

Advertising Department

FARM AND DAIRY

Peterboro, Ont.

GILLET'S EYE

EATS GILLET'S DIRT

MADE IN CANADA

selves, but for others. Pictures make splendid Christmas gifts, and if there are daughters in the family who not buy some pictures for them, or daughters might buy a nice picture for mother. Below we mention a number of well known pictures, each of which copies can be secured from 15 cents up. This list may be helpful in making a selection:

"The Horse Pair," by Rosa Bonheur; "Landscape with Windmill," by Reynolds; "The Lake," by Corot; "Spring," Corot; "The Love Letter," Millet; "The Broken Pitcher," Greuze; "End of Day," Adan; "The Angelus," Millet; "Feeding the Birds," Millet; "A Rainy Day," Corot; "Suspense," Landseer; "Age of Innocence," Reynolds; "The Frugal Meal," Herring; "Whistler's Mother," Whistler; "Shoeing the Bay Mare," Landseer, and many others.

FREE

A beautifully illustrated Fur Style Book—giving advance information on furs and fur fashions—contains 40 pages with 125 illustrations of up-to-date Furs and Fur Garments—All these illustrations are photographs of living people—thus showing how the Furs REALLY appear—it shows Furs for every member of the family.

Don't fail to send for this book TO-DAY—it is now ready for mailing and will be mailed as requests are received.

HALLAM'S FUR STYLE BOOK

1917-18 EDITION

1100—This Case of Black Wolf is made in one of the finest skins shown for this season. It is of genuine seal with the shoulders and the best collar in just what is required to make it one of the warmest and most comfortable to wear. This fur is fine, silky, jet black and very durable. Patterns as shown with this.

From DELIVERED TO YOU, \$8.50

High—Made to match, in one piece, barrel shape, trimmed as shown with head, collar and panels.

Low—Made to match, in one piece, lined and has silk velvet collar. PRICE OF DELIVERED TO YOU, \$7.50

The set throughout is lined with black corded cloth.

Write for a complete catalogue of fur styles for set and for "HALLAM'S".

Address, mailing number as below.

John Hallam Limited

435 HALLAM BLDG., TORONTO.

FREE to Builders and Trappers

1000—This Case of Black Wolf is made in one of the finest skins shown for this season. It is of genuine seal with the shoulders and the best collar in just what is required to make it one of the warmest and most comfortable to wear. This fur is fine, silky, jet black and very durable. Patterns as shown with this.

From DELIVERED TO YOU, \$8.50

High—Made to match, in one piece, barrel shape, trimmed as shown with head, collar and panels.

Low—Made to match, in one piece, lined and has silk velvet collar. PRICE OF DELIVERED TO YOU, \$7.50

The set throughout is lined with black corded cloth.

Write for a complete catalogue of fur styles for set and for "HALLAM'S".

Address, mailing number as below.

ROOFING

FACTORY PRICES

ESTABLISHED 1880. HOLLOW TILE ROOFING. ALSO

CATALOGUES OF ROOFING MATERIALS. ALL

THE LATEST PATENT ROOFING MATERIALS.

MADE IN CANADA

HOLIDAY COMPANY HAMILTON

FACTORY DISTRIBUTORS CANADA

Stopping an advertisement to save money is like stopping a clock to save time. Advertising is an insurance policy against forgetfulness — it compels people to think of you

HOME CLUB

A Merry Christmas Without Money

WE pioneer folk have so much practice in accomplishing things without money, that I think we become rather expert at it, and I thought it might be interesting to others to know how I planned one year that we might have a real Merry Christmas,—with no money expenditure and almost no spare time. I used to think that keeping house was a big job, but now it seems to me that if I had nothing to do but the regular work of a house, that I would be having a fine holiday. And I think most farmers' wives will agree with me.

When first I realized the nearness of Christmas I was dismayed, for I felt so helpless. My first thought was of Christmas gifts and what in the world could I do? When even the stamps necessary to keep up our correspondence is a drain that is felt, it was very evident that I could not spend money even for "slight remembrances." The year before I had no money either, but I had more time and made some little things out of nothing and got along very nicely. But this year I hadn't even time. What, with my private teaching taking up all my afternoons, and only my mornings and my tired evenings to do all my "regular housework," satisfy the demands of my four-year-old daughter, take care of my 100 hens and try to get settled in our new house before I had no money either, I just had to give up the idea of making even "little things."

This worried me considerably. I knew I would be blue and unhappy over being "so shell." Still I did not like the idea of writing and begging my friends not to send me anything. That always seems to me, evidence of a poor spirit for Christmas—as if it presupposed that your friends only send gifts in expectation of what they will get in return. Then, I suddenly remembered "Aunt Mary's" letter which appeared in the Home Club quite a long time ago, and the inspiration came. I would send my "Wild Rose Ketchup," which I am so proud of, for I don't believe anybody else in the world ever made any. So I begged peanut butter tins from my neighbors and behold, my array of Christmas gifts all completed and ready to mail, with one evening's work! And surely it was better than if I had given up and "let Christmas go by," for surely between real friends it is the amount of loving thought involved in the gift that counts.

Plans for Baby Girl.

That settled,—when I was in bed and had time to think, I began to plan

our own Christmas preparations. Of paramount importance of course, were plans for little baby girl. She must have a happy Christmas. But it is really so easy to make a little child happy that it seems a shame that there are people who will not bother. And I was very eager with anticipation of the shining eyes and happy face that we would see on Christmas morning. For baby girl would be with us all night and I even know that there are other children that have more than she. What was she going to get? Well, I'll tell you.

Her daddy rose to the occasion beautifully and made her two little chairs and a table her own size, well finished and stained with cherry stain. Then he had mounted for her a baby owl, the cutest thing, and it was to sit on the foot of her crib to say "Good-morning," when she awakened on Christmas day. I hunted up some little dishes to set her table with that would be just as good as a store set, and an old tray which made a beautiful tablecloth. Then in lieu of a new dolly I fed the family on bread and milk a few times and stole the time when I would have been cooking, to make some real little doll's clothes out of my sewing basket. And my baby is so fond of her dollies and so entirely satisfied with them that I thought she would be almost happier

of spruce and pine boughs and what better could we want?

Our Christmas dinner would be easily planned too, even without money, and would include the luxury of a couple of chickens and a freezer full of ice-cream, both of our own raising.

And to make it a truly Merry Xmas? Why we would have just the gayest day,—first the tree and the ringing shrouks and then the jolly sleigh with girl,—then a run up the hill to see the sunrise on the mountains—then the happy excitement over all the new playthings, etc.—then our Christmas dinner and a jolly sleighride in our big homemade sleigh,—then the evening at a neighbor's. And it would be almost sure to be a lovely day, for most of our days are beautiful—so sunny and still, clear and bracing, with no severe cold as yet.

And don't you think we can have a Merry Christmas without money?—

"A. B. PIONEER."

Catch the True Spirit

I BELIEVE I will draw my chair up a little closer to-night, and see what all the Home Club members are doing. I have enjoyed the letters of the members throughout the summer. "A. B. Pioneer" has been doing splendidly as she has been

The Spirit of Christmas

WHEN bickering ceases, and cross-purposes lose their snarl and become straight again, and maledictions fade into their benedictions fade in: When there's joy in making others happy and pain in selfishness; When burdens drop from weary shoulders and smiles burn brightly through the cold, grey ash of misgivings; When discord gives way to tuneful harmony,—and joys are like they used to be—and the mellow happiness of the long ago comes romping up to its place near the hearth; When the old-time songs and ecstasies find vast contentment, without always profoundly reasoning why; that is the crux of the year—the gold that has been melted out of the seasons—the goal at the long trail's end—The spirit of Christmas—Birthplace of the Christ.—Lloyd Kenyon Jones.

with new clothes for the old ones than with a stronger baby. To finish the list were some home-made blocks (Daddy's also) and two scrap books—one of bed-time stories and one of Flossie Fisher Funnies.

A Perfect Christmas Tree.

Next in importance came the Christmas tree. But that was easy to plan. In this world of Christmas trees, nothing but a very perfect one would suit us. And we would all together choose it and baby girl would help daddy pull it home and she and mother would have a jolly time stringing wild rose berries to trim it with, and popcorn. And in the morning there would be cut-out snowflakes hanging on it, and shiny red apples.

I wonder if people in apple-land can possibly realize what apples mean to the Western pioneers, especially to the ones who grew up in Ontario. I think it is the one thing that we never get over longing for. We often say, "Oh, if we could just once have a real satisfying feed of Ontario snow apples!" But when, occasionally, we have a few apples, I must needs make a pudding of them for they go farther that way. And the thought of the barrels of apples that we used to use in a year, with no orchard of our own, quite intoxicates us. And thought of the apples that are wasted every year in every Ontario orchard takes our breath.

I am meandering, but I wanted you to appreciate the fact that those shiny red apples on baby girl's Christmas tree, would be no minor part of our Merry Christmas. In fact, it noticed they would be the first thing picked by the little one's bright eyes and probably the first thing the little hands would reach for. For house decorations we would have abundance

writing more regularly than some of us.

Now that the Christmas season is drawing near, with is also comes the Christmas spirit. We think of the time when we used to count the days until Santa would make his appearance and fill our stockings to overflowing. Those were happy days, before we knew who Santa really was. We must still play the game and war times or not, there are dear ones whom we can't forget and even though our gifts be small. It is not so much the value of the gift which counts, as the spirit in which it is given and the love that goes along with it. One time an old lady sent me a little cake and a bunch of fresh flowers tied with a faded ribbon. I appreciated that gift very much on account of the spirit in which it was sent. I once said a girl remark, "I paid 40 cents for the box I gave one of my girl friends and she gave me only that hair pin holder which she made herself and I know it cost more than 10 cents worth of material, but I would much rather be presented with a gift made by the giver, even though it be simple and inexpensive, than something which has been purchased by the giver. Any particular thought as to whether or not it would be useful. Let us seek to catch the true Christmas spirit this season.

It seems almost impossible to talk of anything these days without bringing up the war and its effects. Just now it is the Victory Loan and war economies. As far as war economies are concerned, at least, it is necessary to have the cooperation of the women or nothing can be accomplished. What do Home Club members think of the war menus which are being sent out from time to time from the Food Controller's office? I suppose they are

meant to be helpful, but it would be rather difficult for some of us farmers' wives to follow them. Again, many women cannot be moved out of their usual way of preparing and serving meals. Imagine a mother with four healthy children, trying to put them on codfish balls and souffles for breakfast when they have always been accustomed to porridge, apple sauce or syrup.

Of course we must use substitutes for meat twice a week, and make cakes without eggs and drink tea without sugar. Yet when we look at the passers-by, we will see six out of every 10 men who pass smoking. Yes, they are letting their money go up in smoke and yet if the woman of the house happens to burn the steak for dinner, they consider it a terrible waste. In talking to a man one day concerning the high cost of living, he said: "My wife and I can't do with less than a loaf of bread a day and that costs us nine cents." "And how about your tobacco?" I asked. "Well," he replied, "I never use more than a plug a day and that costs just ten cents." And yet his tobacco was simply a luxury for himself. I would call that, the cost of living high.

In a paper which I picked up recently I was amazed to read that nearly a quarter of a million is spent in smokes every day. What a help it would be if some of this leakage was stopped and invested in Victory Bonds. Think of our boys who will be the men of tomorrow. What does the cigarette alone do for the growing lad? Neither Ford or Edison employ young men who use cigarettes. Why? Surely because their systems are under the influence of a drug. Our medical examiners can tell us why more young men are in "C" and "D" classes, than "A" and "B." The liquor habit is of a great menace and we are thankful it is under control to such an extent, but we still have to cope with the "smoking habit" to which so many young men fall a prey. When our country is calling our very best and we must depend on the younger lads to fill their places, should we not try to do our best for their protection? What do our Home Club members think?—"COUSIN ELSIE."

Making Christmas a Festive Occasion

"Betty Boyd," Peterboro Co., Ont.

PROBABLY in many homes this Christmas season, mother and father feel that they cannot afford to spend as much money as usual in gifts and in making the occasion a festive one. I hope none of us will make the mistake, however, of feeling it our duty to dispense altogether with gift giving and other jollifications which go along with Christmas. Children especially, look forward with much joy to Christmas day that it would be a real tragedy if they were forgotten or neglected by Santa. One way in which we can make things appear "Christmassy" and at little expense, is by decorating the Christmas dining table and the children will take a great deal of enjoyment out of such decorations, as will also the grownups.

I wonder how many readers gather pretty maple leaves in the fall to make use of in this way? There is usually an abundance of richly colored leaves lying around the farm and they work in very nicely for decoration purposes at a season of the year when trees are stripped and the ground is white with snow. Of course it is too late to try out this method this year, but to those who might like to do so in future, I will give the simple method which I follow. The leaves should be gathered while fresh in appearance and waxed the same day as gathered. This year I selected a number of pretty leaves,

but left them in the house over night and the next day they were wrinkled and dried up, so I did not make use of that assortment. All that is necessary is to melt some paraffin wax, dipping the leaves into it one at a time, dipping them rather quickly, so that the wax will not have a chance to lodge by spreading out on paper. These leaves make a very pretty decoration for the table, or may be used in other ways if desired.

Another decoration for the table is evergreen. It may be laid diagonally across the table forming a cross in the center. It may also be hung in small loops around the edge, which makes a most effective decoration.

A large pumpkin cut in half and the center scooped out and filled with rosy apples, makes an attractive center-

piece, and especially so this year when apples are such a scarce commodity. Let us save up a few of our best apples, if we are fortunate in having any at all, for the Christmas season.

Here is another idea for a centerpiece which is quaint and something the children, and some of the older folks too, will not soon forget. Make a tiny house of cardboard, cut windows and doors and over these openings paste red tissue paper. Cover the roof with white cotton or batting to represent snow and put a Santa Claus figure astride the roof, probably with his sack filled with home-made candies. Place a lighted candle within the house to light up the red colored openings and it is all ready for action.

A few Christmas bells and glistening tinzel hung and draped around the rooms, also add much to the festive appearance of our homes.

Dick and Jimmy were spending a few days with their grandmother, who spoils them, as grandmothers will. One night they were saying their prayers, and little Jimmy vociferated his petitions to the heavenly throne in a voice that could be heard a mile. He was telling the Divine Providence what he wanted for Christmas and his enthusiasm in the cause got on his brother's nerves.

"What are you praying for Christmas present so loud for?" interrupted Dick. "The Lord ain't deaf."

"No," whispered Jimmy, "but grandma is."

The women of Canada are called upon to join a great Food Conservation army that will have as its aims the providing of food for the fighting men and for the Allies, and the formation of habits of thrift.

For You--a Beautiful Fur Coat--\$160 Brings It

Here is just the coat. That is if you want a coat that will wear well, look well and cost little. The choicest grade skins from Canadian muskrats were used by our expert designers in making this beautiful coat. The coat has a deep shawl collar, slash pockets, cuffs and belt. A close fitting waist line to extra full ripple skirt. It is trimmed with Hudson Seal. The most exacting care was taken by our operators in order that this coat might be a worthy example of their skill as furriers. The coat is carefully lined with beautiful quality silk. Length of the coat is 45 inches. It will pay you to consider this delightful Canadian Muskrat Coat. It's a phenomenal bargain. Order by its number--442. Price--

\$160

Our Guarantee Protects You

Here is our guarantee which covers purchases made through our Catalogue. Read it carefully.

"If, on receipt, you find that the furs for any reason are not satisfactory, write your name and address on the outside of the package and return them in ten days in good condition, stating why the goods are returned, and we will pay the transportation charges both ways and exchange or refund the money in full. All that we ask is that before you ship the article you notify us. We make no exception with any goods. Our policy is to give you complete satisfaction. Therefore we do not wish you to keep any article that will be in any way unsatisfactory to you."

This Set Only \$87.50

Alaska Sable is a fur that is always in style, and so it might be for it is very charming in appearance.

You would certainly be delighted with such a collar and muff as we illustrate below. The Crutch collar (No. 761) is very easy. Best quality skins have been used and the linings are made of soft silk. The muff (No. 124) is the new round mutton shape and is made of best quality skins. It has soft silk lining, silk wristcord, and eiderdown bed. Mention both numbers when ordering the set. Separately the collar costs \$55.00 and the muff \$32.50. The set



FURS BY MAIL

Write TO-DAY

You Should Have Our Big Free Catalogue

Wherever you live in Canada you should secure a copy of the Fur Guide. Many styles in fur coats, muffis, stoles, etc., are interestingly pictured. Wonderfully low prices are quoted on the furs. From cover to cover the book is full of interest. You will enjoy studying its pages. Send for a copy to-day. The book is free. We will mail a copy as soon as your request reaches us. Write at once. Send us postcard to-day.

Other Bargains

822--Natural Canadian Wolf Neckpiece; two full skin animal skins; made from best quality skins; finished with 2 bands, 2 tails, and paws; soft silk lining..... **\$1800**

11565--Gent's Fur-lined Coat; shell of imported black beaver cloth, well tailored, lined with good quality full furred marmot skins, storm collar of silver Mink; length 60 inches..... **\$3500**

1663--Marmot Neckpiece, made from best quality skins; long tab back and front; made to slip through fur; finished with head, tail and paws..... **\$1150**

1858--Natural Alaska Sable Scarf, made from sele ted skins; made to throw over shoulder; finished with silk; best quality soft silk linings..... **\$4250**

850--Hudson Seal Coat, 42 ins. long, with extra large square back collar of fine quality Alaska Sable; deep cuffs, slash pockets; seal buttons; slightly fitted waist line with extra full One ripple skirt, best all silk lining..... **\$28500**

664--Alaska Sable Neckpiece, a very smart easy fur, made from best quality skins; finished with head, tail and paws..... **\$2500**

1843--Ladies' Fur-lined Coat; shell made from best quality imported broadcloth, lined with best quality Canadian muskrat, 28 ins. long; large collar, straps, cuffs and pockets; length is 50 ins..... **\$10000**

SELLERS-GOUGH FUR CO. LIMITED
244-T YONGE ST. - TORONTO

BOYS AND GIRLS

Christmas in the Barn

SHE went to visit the good old farm, when Christmas came with its holy charm. Little Maid Marion, just turned five, the winsomest, merriest sprite alive, whose heart was full of a tender love for all God's creatures below, above.

Out with Grandpa on Christmas morn, she fed the cattle their hay and corn. And hunted for hens' nests here and there.

Up the ladder and down the stair; Till at length in a corner, set one side, A last spring's scarecrow she espied. Battered and dusty and grim it stood, With arms of straw and a head of wood.

Wearing a hat of ancient style, And an old grey coat that would make you smile, And leaning sadly as if the care Or the griefs of life were too much to bear.

Frightened, our wee maid turned to fly,

Then stooped, with a tear in each soft-brown eye, As her soul with a wondrous pity burned, For this lonely creature whom joy had spurned. "I wish you, sir" (and she turned her head), "A Merry Christmas," she softly said.

Waiting for Santa Claus

I THOUGHT I should certainly see him, And so I've been trying to dress; These stairs are so chilly to sit on, He must have forgotten, I guess, The days I've been waiting; I just wish he knew The thin little keyhole I've had to peek through.

There's my empty sock where I hung it; I came down to see it stuck out With engines 'n' soldiers 'n' tool chests, And sugar toys scattered about— And only this dark—oh, it's true what they said; Please Santa, come now! I'll go right back to bed!

Their Christmas Dinner

CLYDE and Gerald Rowe's parents were very poor and could not afford to get their children costly Christmas presents or even an extra dinner on Christmas Day. But nevertheless, they were a very happy family, and the two boys were always contented with what they had.

As they were coming home from school the Friday before Christmas they heard their companions telling one another what a good time they were going to have on Christmas Day and how many roasted geese and turkeys they were going to eat. Then Clyde and Gerald remembered how poor they were and wondered what they should have for a Christmas dinner. They made up their minds that there would not be much of anything unless they got it, and just then they remembered that the wild geese had been coming up the river all fall and winter, and they determined to have a wild goose for the Christmas feast. So on Saturday morning the two boys got up early and did their chores, and then after breakfast they borrowed their father's shotgun and started up the river, taking their dog Toddlies with them. They tramped for a good many miles up the river, but were not able to find any geese, and were just going to turn home quite discouraged, when one of them had a happy thought.

"I know where they will be," shouted Clyde. "They will be in the swamp, of course. Why didn't we think of it before?"

As they drew near the swamp they could see the plumage of the geese as they dived in the water, and Toddlies could hardly be kept from tearing off and frightening them all away. The boys managed to kill one fine big fellow and sent Toddlies in after him, greatly to the little dog's delight. Then they hurried home with their prize. When they got home they found they had been so excited on their wild goose chase that they had forgotten to eat their lunch.

On the bright, snowy Christmas morning, when the boys smelled the pumpkin pies their mother had made and the wild cranberries cooking, they were glad to think that they really had helped their parents by getting a real Christmas dinner.

Christmas Long Ago

THROUGHOUT cracks in the chinking beneath the rafters the north wind had sifted a covert of snow over the many-colored log-cabin quilt. Up from the kitchen below came the sounds in loud, clear, light of breakfast of oatmeal, buckwheats and pork gravy. Then full consciousness returned. This was Christmas morning! Back flew the coverlets, and bare feet made prints in the snow-powder on the floor. A wild rush down the stairway, and a beeline for the fireplace where the home-knit balmoral stocking hung. There lay a ten-cent tie, and a bag of molasses candy, an apple and a mouth-organ. It was enough—more than enough! Then father came in from milking, and mother set the milk in the old yellow crocks, while father washed up. Then mother, as shyly as a girl, handed father a bundle, and father gave mother a smaller one. Father's bundle proved to be a "comforter," and mother's a pair of stockings. Then how happy everybody was, and father kissed mother, and they all sat down to breakfast.

And after breakfast the front room was opened up and a roaring fire of grubs built in the stove, and mother and father sat down and recounted the

Christmas days in the Old Country where the holly grew and "The mistletoe hung in the old oak hall,"

and there were stories of Robin Hood and Dick Turpin and of Merlin the Old. Then a jingle of bells, and the cousins and aunts and uncles! The sun rose higher and the snow began to soften. Such snow men as were built! Such babies as were fought! Such appetites as were developed!

The goose and the Christmas pudding! Father stood at the head of the one table and carved, a butcher knife in the other, a two-twined table-fork in the other. How it all comes back—the laughter that was a precious thing, and the good cheer that made poverty seem abundance. All too soon came nightfall, and the parting voices and the stars shining through cracks in the roof, and mother singing

"O little town of Bethlehem, How still we see thee here; Above the deep and dreamless sleep The silent stars go by."—Selected.

The Spirit of Christmas

"MERRY CHRISTMAS, Sir!" Kitty's door resounded to her brother's vigorous knocking.

"Merry Christmas yourself," she called back sleepily, and sat up in bed rubbing her eyes. Then she remembered and flung herself out of bed. This was Christmas! Not the merry-belled, snowy day traditionally laid out for Christmas, but a foggy, drizzly, rainy old Christmas. Two heavy weights tugged at her heart; this weather would upset all plans for the coming of her "bunch" from town to help enjoy the tree so gorgeously decorated down stairs and awaiting their coming, and then her father's gift to her would be the fur set she had teased for so persistently. Even as she lay there she had a vision of red-headed Nellie Clyde anguishing into those furs that she had set her heart on. Her hopes had run high until day before yesterday when she had stopped into Miller's store for another look at "her fur set" the clerk had told her they were just sold, and she had seen Nellie Clyde's mother just leaving the counter with a large package.

She got out of bed and began to dress, soliloquizing as to what use Christmas was anyway. There were no surprises any more; no more Santa Claus fun. She knew what all her gifts would be—the usual embroidery trifles she exchanged every year with her girl friends; gloves or some such thing; feminine accessories from brother Jack, and the party dress which mother would have liked to be a surprise, but could not, because it had to be "tried on" when the dressmaker was there last week. Kitty could see herself taking the gay wrappers off her gifts, and pretending to be pleased when the family gathered around the tree after the big dinner. Bah! Why couldn't something nice happen once in a while!

Kitty sat on the edge of the bed and made faces at the weather. Not one cheerful sight in view! She could not make out through the rain the little houses down the road into which the Noble family had moved a short time ago. There was no sign of life around the place. Not even smoke from the chimney! "Fuh! Must be lay folks that don't ever have the fire started by this time, and on Christmas morning, too," thought Kitty. Then she remembered she had heard father telling mother that Mr. Noble was quite seriously sick with pneumonia, and

\$100 in Christmas Prizes
WHAT PRESENTS ARE IN THE CARS FOR BOYS AND GIRLS

\$100 IN CASH PRIZES FOR THE BEST REPLY



So that we may become acquainted with more young people this Christmas, we are giving you this train loaded down with Christmas presents. Each car contains one kind of present and the name is on each car but the man who painted the name got the letters all jumbled. Worse still, the man who coupled the cars got them in the wrong order. Now, can you straighten things out and re-arrange the letters in the names of the presents in each car and put the cars in their right order behind the locomotive?

Car No. 6, DOES ILL, contains "Dollies." The other cars may contain gloves, baseballs, animals, bicycles, building blocks, skipping ropes, nine pins, engines, skates, Noah's Ark, perfume, lanterns, tools, footballs, games, or something else. It is for you to find out.

Should you get the cars behind the locomotive in their right order, you will find that the first letter of the correct name of each Christmas present in each car when these first letters are all put together will spell out the name of a great Nation in Europe, one of the Allies—a Nation whose Navy controls the Ocean.

On Christmas Day, Uncle Peter, who edits the Bunny Page in EVEREVVOMAN'S WORLD, will judge the answers and award the following cash prizes to young people under seventeen years of age complying with the rules of the contest, whose answers are all correct or nearest correct, and best written. So get busy and send in an answer to-day, and this Christmas Season may be the happiest you have ever had.

The Big Cash Prizes

\$25.00 Cash to the Boy or Girl who sends in the best reply. \$15.00 Cash to the Boy or Girl sending the second best reply. \$10.00 Cash to the Boy or Girl sending the third best reply. **DOLLAR BILLS.** Fifty bright, new, crisp \$1.00 bills to the fifty best Boys and Girls with the 50 next best replies.

If you are bright and quick you will also have the opportunity of winning a Shetland Pony and Cart or Bicycle and many fine prizes in a pleasant contest even more interesting than this one.

Write your answers in pen and ink, using only one side of the paper. Put your name, address and age in the upper right hand corner of each sheet.

Send Your Answer This Very Evening!

THERE are 53 Cash Prizes and in addition other fine awards for every young person who qualifies his or her entry in this fascinating contest. Each boy or girl desiring his or her entry to compete for one of the fine prizes will be required to perform a small service for Everevvoman's World for which additional money or Cash Payment will be given. Wouldn't you like the \$25.00 Cash? Wouldn't you like a Shetland Pony and Cart or Bicycle? These fine prizes will go to your young friends and we would like you to get the best of them. Address your answers as follows:

Uncle Peter, c/o Everevvoman's World, 121 Continental Building, Toronto.

her mother had said she would go right over next day to see what she could do. But both Kitty and her mother had been so busy with Christmas preparations and Christmas shopping that the little family down the roads had been crowded out of their front and finished dressing. Regretment swelled in her heart against a world that could thrust such a perfectly miserable Christmas into her life.

And The Spirit of Christmas stood outside her door and sighed and sighed.

When Kitty came tardily to breakfast her father was recollecting a conversation he had with the doctor who was returning to town from the Noble house.

"Doc, says he'll get along all right now, but that Mrs. Noble is worth a fuzzle. Seems she has done all the nursing herself, and she did it right, too, and looked after the three children besides. But she's all played out now. Maybe we could do something for her, Mother, seeing this is Christmas."

"Why, of course," her mother replied, conscience stricken. "I'd go right over there myself if it wasn't for cooking the dinner. I'll send Kitty over with a basket of things as soon as breakfast is over."

So Kitty started out, with murmurs on her lips against "folks who couldn't take care of themselves." She would just leave the old basket inside the door and say "Mother says Merry Christmas," and away she'd go. What did folks have to be sick for? She hated those children already!

And The Spirit of Christmas followed with lagging steps and bowed head.

Kitty opened the door in answer to a timid "Come in!" and found herself in the Nobles' kitchen. Mrs. Noble sat, a dejected heap, in a rocking chair, her uncoubed hair forming a straggly halo for her tired-looking face. The baby, a child of about four, still clad in her nightgown, stood beside the chair, patting her mother's hand, which hung limply over the chair arm. The other children, six and eight respectively, stood near their dresses and shoes still undressed, and their faces bearing evidence of a breakfast recently eaten.

"Ith you Thantie Clautheth ither?" asked the little tot. Then, not waiting for an answer, prattled on, "Muvver thayth Thantie wath too tired to come to our houth lath night, but maybe he'll come thoon ath my papa ith better."

"No, I'm not Santa Claus' girl," laughed Kitty. "I'm Kitty Smith. I live in the brown house on the hill. Mother sent you a few things in this basket, and wishes you a Merry Christmas."

"Oh, ith you going to thay and play wif me and tell me thout Thantie and his reinderth? Muvver ith too tired to tell me thorth to-day."

The Spirit of Christmas looked wistfully at Kitty.

"Well, sure I'm going to stay and tell you about old Santa and his reindeer. But first I'm going to help mother to bed and get this fire going, and Kitty was all action in a minute."

Almost before she knew what had happened, Mrs. Noble found Kitty, hat and coat off, helping her, despite tired nerves succumbed to the merciful unconsciousness that nature had been demanding for so long.

Then Kitty entered with zeal upon the task she had laid out for herself. In short order the fire was roaring up the chimney, the dishes washed, the floor swept, the children washed and dressed, a dainty lunch prepared from the contents of the basket for

the invalid and the children, while the mother was allowed to sleep on.

After baby was settled for her afternoon nap and the other children playing contentedly upstairs, the Spirit of Christmas must have come and laid a hand on Kitty's shoulder, for it was then she got the "idea."

Very quietly she stepped to the phone and carried on a mysterious conversation with her mother.

In due time brother Jack drove to the door, and then such whisperings, such unloading of parcels, such giggles and warblings to be quiet.

Finally everything was ready to suit the two workers, and Kitty, hat and coat on, awakened Mrs. Noble to tell her she must go directly, and that she expected to come every day of her Christmas vacation to play with "that darling baby."

"Then without waiting to see the effect" of the brilliantly lighted tree or the heavily laden table, Jack and Kitty ran out into the darkening night and drove away before you could say "Jack Robinson."

"Oh, by the way, Sis," said Jack as they drove along, "we waited to have our Christmas until you could come home, but Dad sent his gift to you over with me, for he thought you'd like to 'hear' from home." He handed her the box from which with a cry of delight she took her precious rat set.

"Oh, Jack!" This has been the happiest Christmas I ever spent," she cried, throwing her arms around her brother's neck.

And The Spirit of Christmas looked on and smiled.—Kimball's Dairy Farmer.

Christmas and Food Controller

J. H. Hunter of Farm and Dairy.

SO many people, in fact one might almost say, in most of us, the very mention of Christmas conjures up visions of turkey, plum pudding and a host of other very good but wholly unnecessary things that generally grace the festive board on the 25th day of December. With some, the return of the season of holly and mistletoe seems only to mean a high time of extravagance, of excessive eating and drinking, the only result of which is a day in bed with what medical men call "Christmas complaints."

At any time such waste is wrong. At a time such as this, it is criminal. No one need be afraid that we are going to advocate a bread and water diet for Christmas day, but few of us but have to confess that we might have eaten less at Christmas and felt the better for it in more ways than one. All that we advocate is the preparing of the Christmas meals with the needs of our own boys and those of our "inner man" in mind, and the elimination as far as possible of the useless waste that usually attends the feeding of the "inner man" at this season. Each of us in this sense can be his own food controller to the extent of his individual eating.

To tens of thousands in the war zone to-day, Christmas does not mean turkey, plum pudding and candies, but turning their eyes to Canada, they only ask that we "gather the fragments that nothing be lost" and out of our abundance we grant them a little. It is a little thing after all we are asked to do, a little sacrifice we are called upon to make, compared to the awful privations endured by the Belgians. But the consciousness that we are wasting our money and doing a little to relieve human suffering will make Christmas for us all the sweeter as one of that company who,

"List with hearts by love prepared
While Christmas bells are ringing,
Who bath his feast with others
shared
Shall hear the angels singing."

For Special Occasions Such As Christmas

when every woman wants her baking to be at its best.



Reindeer Flour

is the prime favorite with the women folks in hundreds of farm homes throughout Ontario. The reputation of Reindeer has been built entirely on its merit. Made from the finest of Manitoba No. 1 Wheat, preserving the natural nutritive properties of the grain, handled in the most up-to-date scientific manner to produce the finest, purest flour possible it is no great cause for wonder that Reindeer is daily gaining new admirers.

For War Time Economy

In your baking you will find Reindeer satisfies every requirement of the most exacting Food Controller. There is no waste with Reindeer and its body builds a cake if an excellent substitute for meat. Order a trial box from your grocer to-night. For pastry we have special brands.

Peterboro Cereal Co., Limited
Peterboro, Ont.

Our Other Brands

For Bread
Oatmeal
Peach Blossom
Wildo
Gold Crown
Wheat
Trent Valley
Fire Quaker
Eastman
For Pastry
Portwess Delight

"If Only I had More Insurance"



IN the last few days of July, 1914, this man, like all the world, felt secure under the serene skies with the nations at peace.

Within ten days the thunderbolts of war appalled humanity—so little do men know of what lies behind the veil of the future!

What would this soldier not give for the knowledge that he had provided sufficiently for the future of his loved ones while yet there was time?

Are you profiting by the lessons of the times we live in? The hazards of life are by no means confined to the soldiers at the front. Even in the quiet security of home life, death and accidents claim their victims. The individual is helpless against the future—unless protected by life insurance.

Every civilian should realize the great lessons of the war, and secure adequate insurance protection.

The Mutual Life of Canada, with assurances in force of over \$120,000,000, and assets of over \$30,000,000, has a policy to meet your particular requirements and needs.

Write for booklet entitled "Ideal Policies." When writing, state age at nearest birthday.

The Mutual Life
Assurance Company of Canada
Waterloo, Ontario

**DEAL WITH
Farm & Dairy's Advertisers**

"I Either Had to Sell Some Cows or Get a Machine"

THAT'S the identical position hundreds of our dairy farmers are finding ourselves in at present. We have either to go out of dairying—or get a machine. With good prices—better prices in view, it is not good business to reduce our herds. That's just what

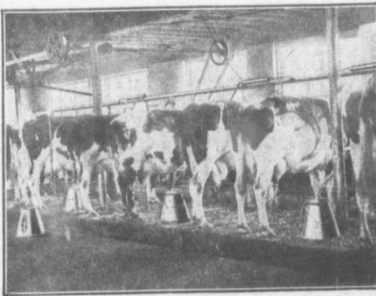
Mr. W. A. Barr, a big dairyman of Olds, Alberta, was up against when he wrote the above lines.



Neidpath King (48503), Ayrshire bull, owned by E. A. Turner, St. Paul's, Ont.

in its favor, as there is nothing to go wrong. Yours truly, W. H. JOHNSTONE.

Mr. Turner, after using the Hinman over three years, on his registered Ayrshire herd, writes in part: "I can think of no reason for not purchasing the same machine again, and I would not want to return to hand-milking."



The HINMAN in E. G. Lang's Model Dairy, Waterloo. Mr. Lang obtains a better Price for his Better milk due to HINMAN Cleanliness.

The Infallible Hired Man

You can employ him for your herd—yes, at much less cost than you think—and with practically no expense after first cost—the hired man that will be on the job 365 days in the year—morning and night—always agreeable, pleasant and a consistent milker. No quitting in the height of

Mr. W. A. Barr, of Olds, Alberta, writes:

"The cows seemed to like the machine from the start. We had no trouble with them and I believe the man that will milk my cows as well as this machine is hard to get."

Send for our Hinman Booklet—It is free for the asking—and it will show you some facts about milking that will surprise you.

H. F. Bailey & Son Galt, Ont.

Sole Manufacturers for Canada



Over 30,000 Sold.

Dear Sirs:—

I have used the HINMAN machine for over one year and am fully satisfied with it. We would not try to do without it, even if it cost twice the price. I believe for economy, efficiency and simplicity, it cannot be equalled.

Yours,
J. A. EVANS.

Chilliwack, B.C., May 10, 1917.

Mr. Cowieson, of Queensville, Ont., supplies one of the highest class candy manufacturers in Toronto with cream. He uses a HINMAN and states: "She works the very best and money would not buy it, if I could not replace it with the same kind." He states further, that he has not had five minutes' trouble in nearly one year's service.



Part of Mr. Cowieson's fine Jersey Herd at Queensville, Ont.

Dear Sirs:—

This is our second year and we are well satisfied with the work of the machine. It has had no ill effect in any way on the cows. We find young cows and heifers require least stripping. One man can run three units and carry milk to milk room, milking the 17 cows in one hour. Cost of up-keep in last two years has been about \$5.00. We expect in very near future to install two new units on a row of 17 heifers with first calf. We are

Bloomfield, Ont., Sept. 21, 1917.

Yours truly,
A. D. FOSTER & SONS.

HINMAN MILKER

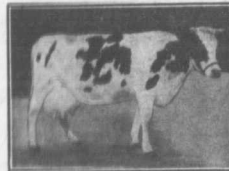
SIMPLE PRACTICAL EFFICIENT

Lowest First Cost

Lowest Upkeep

Easy to handle—no complicated pulsating mechanism—no air pipe lines—no vacuum tanks. Each unit operates separately. You do not stop milking to change pails.

A. D. Foster & Sons' Valuable Herd is milked with a HINMAN.



Helena Sylvia Posch (21373)
—7-day test—
Milk 809.4 lbs., Butter, 24.49 lbs.
Best day's milk, 116.4 lbs.

HINMAN
The
Valve Chamber
MILKER

T
m
of
On
ber
of
wh
hous
than
case
recip
a b
them.
284
the
upon
city
opio
the
day
a
would
slip
of
one
and
ne
wear
or
acco
terial
make
fible
cl
may
mat
breat
1106
dolla
how
th
differ
one
light
in
in six
in
in help
the
yard
fo
a 24-in
in child
1897-1

Christmas Gifts Our Friends Will Appreciate

A Useful Device at Small Expense

Farm and Dairy patterns shown in these columns are especially prepared for Our Women Folk. They can be relied upon to be the latest models and include the most modern features of the paper pattern. When sending your order please be careful to state just what you desire for adults, for children, and the number of the pattern described. Orders to Our Women Folk to reach us 10 days after receipt of the pattern described. Orders to Our Women Folk to reach us 10 days after receipt of all patterns to Farm and Dairy, Peterboro, Ont.



To give Christmas presents and to whom to give, is probably one of the questions which is troubling the minds of us with the approach of the Christmas season. Here are a number of simple ideas for Christmas gifts, which we can make ourselves. And these are more appreciated, because the recipient feels that we have really given a part of ourselves in the time spent on them.

2264—House coat for men—Probably the majority of men on the farm look upon the "house coat" as suitable for the city man only. But why should this opinion be prevalent? When the man of the house comes in from work for the day and sits down to read the paper, would it not be a very simple matter to slip on a comfortable coat such as the one here shown. He will feel comfortable and neat, and at the same time, will not wear out the coat belonging to his best or second-best suit. Attractive materials can be secured from which to make these coats and by getting reverse-mesh cloth, the collar and other trimmings may be made from the reverse side of the material. Seven sizes: 45 to 44 inches breast measure.

1506—Little girls who are not fond of how they enjoy dressing up doll in her different costumes. This outfit such as the one here shown for Miss Dolly should delight the heart of any little girl. Cut the dress 14, 16, 18, 20, 22 and 24 inches in height. It requires 3/4 of a yard for the dress of 35-inch material and one yard of brown flannel for the monkey yard of material for the elephant and one-half yard for the rabbit.

This model shows three articles, a blouse, an apron and a fancy bag. Note the attractive collar on the blouse, also the neat nicely in suit. Such a design would make up particularly suitable for Christmas gifts. Not many of us will take the trouble to make fancy aprons for ourselves, but if we are presented with one, it usually comes in very handy. The blouse, 37, is cut in six sizes: 34 to 44 inches bust measure in one at 2, medium, 1844 are cut and 3/4 of a yard for the bag. This model shows one pattern and the apron and bag the other. Patterns for the blouse articles, therefore, would cost 20 cents.

2275—Dolly's Outfit—Here is another very charming outfit consisting of a new dress and hat for Miss Dolly. Cut in six sizes: for dolls 16, 18, 20, 22, 24 and 26 inches in length. One and one-half yards of 27-inch material for the dress and 1/4 of a yard for hat, for 24-inch size.

2273—Dolly's Set—This pattern includes a dress, petticoat and combination and should prove very attractive to the little girl. It is also cut in six sizes: for dolls 16, 18, 20, 22, 24 and 26 inches in length.

2278—A set of Pretty Bags—The pattern supplies each of the three attractive calls for two patterns, the blouse being one pattern and the apron and bag the other. Patterns for the blouse articles, therefore, would cost 20 cents.

How many of our Women Folk really enjoy the weekly mending? I do not hear many "Ayo's," so must take it for granted that the number who enjoy this task are few and far between. Instead of tackling the mending with enthusiasm, we are more apt to make some such remark as: "Oh dear, here is this never-ending task again, and there seem to be more holes than ever this week. Is it not true that one big reason why mending is oftentimes a bugbear is owing to the fact that we have not a systematic plan for handling it? I know that in some homes the mending is piled on the sewing machine in a conglomerated heap. It is my opinion that if we had a special place to keep mending and mending materials, so that it would be out of sight until we were ready to commence operations, the task would be simplified. I have a special reason for holding this view, because I have seen it tried out.

A friend of mine has an exceedingly attractive device for holding mending materials. When I saw it long ago the idea occurred to me that it would be a splendid idea to pass along to Our Women Folk, and information concerning its construction was very kindly given me, and also of course, was the lid of the cheese box inverted, was the lid of the cheese box on the outside, but it was lined with chintz of a dainty pattern. In this the work. Here are the instructions



Father's Task on "Blue Monday."

The weekly washing is usually one of the hardest tasks in the home, and sometimes it falls to the lot of the menfolk to lend a helping hand. Just a hint: by installing a power washing machine, the women folk will be glad to take full charge of this duty.

cut a piece of denim wide enough to cover the box, both inside and outside at once. The bottom was also covered with the denim, and instead of tacking this, we found it easier to paste it on. This compartment is used for holding sock stockings and other particles until mended. It is of ten piled high, so a cover was omitted. The upper compartment, which was covered with the lid of the cheese box inverted, was the lid of the cheese box on the outside, but it was lined with chintz of a dainty pattern. In this the work. Here are the instructions

cut a piece of denim wide enough to cover the box, both inside and outside at once. The bottom was also covered with the denim, and instead of tacking this, we found it easier to paste it on. This compartment is used for holding sock stockings and other particles until mended. It is of ten piled high, so a cover was omitted. The upper compartment, which was covered with the lid of the cheese box inverted, was the lid of the cheese box on the outside, but it was lined with chintz of a dainty pattern. In this the work. Here are the instructions

A Practical Demonstration of Its Usefulness.

In this illustration the mending stand described in where the busy fingers of the housewife will find the needle, while at the same time fresh air is being enjoyed.

for making it, as nearly as possible in the way they were given me: "In the first place," my friend told me, "we secured a cheese box and cut out one-quarter of it off, leaving the box three-quarters of its original depth. The lid of the box was left intact, and we also secured an extra lid. We cut the striking off the extra lid, leaving but the round piece of wood. Our original plan of finishing the box with oak staining had to be abandoned, so we found the wood coarse, so our first task was to cover the three portions. I purchased a strong piece of brown figured denim, which corresponded nicely with our fumed oak furniture. This was rather expensive, but I considered it a wise investment, as to cheaper material would have had to tend to the necessity of putting up the box. Just here I would like the material on tightly, in order to have a neat appearance when completed.

"We covered the lower portion of the box first, and to do this neatly I, R. M.

and papered these, then put on a filling, and stained them to a uniformish. The compartments were very securely screwed to these uprights, so the whole contrivance is quite solid. We put little flat slides on the bottom instead of castors."

My friend gave me an approximate estimate of the cost as follows: "It required about one and one-half yards of denim at 55 cts. a yard. The chintz used was not considered in the expense statement, as it had been left from making side curtains. The gimp and tacks amounted to about 10 cts., and the wooden upright cost in the neighborhood of 50 cts. The brass chain was about five cents. Bringing the total cost to less than \$2, and in our minds it has every advantage of the standard sewing stand which usually costs about \$10."

Just one more suggestion. The Christmas season will soon be with us. Would not such a mending device as the one described herewith make a splendid gift for the busy housewife in many of our homes?

Brown Swiss Cattle

THAT
DAIRY AND DUAL PURPOSE BREED

Which farmers have looked for but few have found. Now is the appointed time to start a herd of

BROWN SWISS

Get into line on the road to success. Two of their many characteristics are

GENTLENESS and PERSISTENCY
IN HANDLING AT THE PAIL

For literature and information correspond with

RALPH H. LIBBY, Secretary, STANSTEAD, QUE.

Canadian Brown Swiss Association

Inglewood Ayrshires & Chester Swine

Fifty head to choose from. Among others we have a son and grandson of FLOSSIE OF BURNHURLE, record 14,415 lbs. milk, 569 lbs. fat. Her first daughter qualified as a two-year-old with 11,631 lbs. milk, 440 lbs. fat. Also a grandson of SCOTCH THISTLE, the champion R.O.P. 3-year-old, record 14,907 lbs. milk, 631 lbs. fat. Our herd sire is a son of BILBERRY 2nd of SPRINGBANK, the heaviest milking 2-year-old ever tested in Canada.

Our swine are as good as the best. We have the first prize sow at Canadian National, 1917; second prize sow at Guelph Winter Fair, 1916. Our stock boar weighs over 800 lbs. at 3 years, and we have recently imported a young fellow to use along with him. Get our prices on pigs 6 weeks old, ready for immediate shipment.

WILSON McPHERSON & SONS ST. ANNS, ONT.

LAKESIDE AYRSHIRES

A choice selection of young bulls for sale from Record of Performance dams, imported and Canadian bred. Sires: Auchenbrain Sea Foam (Imp.), 3:783; many times grand champion. Fairfield Mains Triumph (Imp.), 3:1137; a son of the noted Holbrand Perfect Flocks. Write for catalogue.

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

Manager: D. McARTHUR,
Phillipsburg, Que.

Every Farm should have
an "Ayrshire"

MORE
MILK
MORE
BUTTER
MORE
MONEY

World-famous as the economical producer among dairy cattle.



WRITE W.F. STEPHEN, Secretary
CANADIAN AYRSHIRE BREEDERS' ASSN.
BOX 508—HUNTINGDON, QUE.

SPRINGBANK AYRSHIRES

Bulls from one month to twenty months old for sale, and a few heifer calves. All are bred to color and type and from E. O. P. dams. If you need a well bred bull or heifer write at once.

A. S. TURNER & SON
Ryckman's Corners, - Ontario

HICKORY GROVE JERSEY FARM

offers for sale, 1 Jersey bull, 19 months old, and 1 Jersey bull calf, 10 months old, both solid color and eligible. Both quiet and vigorous and in good condition. Sire and grand-dam from imported stock. Dams are heavy fat producers. Write

RANK DIXON
Niagara Falls South, Ontario

The Heart of the Desert

(Continued from page 32.)

Porter, too, looked at the dark, young face across the table, and something in its inscrutable calm seemed to madden him.

"My boyhood here? Yes, and a happy boyhood it was! I came home from the range one day and found my little fifteen-year-old sister and a little neighbor friend of hers hung up by the back of their necks on butcher hooks. They had been tortured to death by Apaches. I don't like Indians!"

There was an awkward pause at the dinner table. Li Chung removed the soup plates noiselessly. Cartwell's brown fingers tapped the tablecloth. But he was not looking at Porter's scowling face. He was watching Rhoda's grey eyes, which were fastened on him with a look half of pity, half of aversion. When she spoke it was as if he cared little for the opinions of the others but would set himself right with her alone.

"My father," he said, "came home from the hunt, one day, to find his mother and three sisters lying in their own blood. The whites had gotten them. They all had been scalped and were dead except the baby, three years old. She—she—my father killed her."

A gasp of horror went round the table.

"I think such stories are inexcusable here!" exclaimed Katherine indignantly.

"So do I, Mrs. Jack," replied Cartwell. "I won't do it again."

Porter's face stained a deep mahogany and he bowed stiffly to Katherine.

"I beg your pardon, Mrs. Newman?"

"I feel as if I were visiting a group of anarchists," said Rhoda plaintively, "and had innocently passed round a bomb on which to make conversation!"

Jack Newman laughed, the tension relaxed, and in a moment the dinner was proceeding merrily, though Porter and Cartwell carefully avoided speaking of such a subject. The conversation centred round Rhoda. Katherine always had been devoted to her friend. And though men always had paid homage to Rhoda, since her illness had enhanced her delicacy, and had made her so appealingly helpless, they were drawn to her as surely as bee to flower. Old and young, dignified and happy-go-lucky, all were moved irresistibly to do something for her, to coddle her, to undertake impossible missions, self-imposed.

Porter for his place of vantage beside her kept her plate heaped with delicacies, calmly removed the breast of chicken from his own plate to hers, all but fed her with a spoon when she refused to more than nibble at her meal.

DeWitt's special nightmare was that drafts were blowing on her. He kept excusing himself from the table to open and close windows and doors, to hang over her chair so as to feel for himself if the wind touched her.

Katherine and Jack kept Li Chung trotting to the kitchen for different dainties with which to tempt her. Only Cartwell did nothing. He kept up what seemed to be his usual fire of amiable conversation and watched Rhoda constantly through inscrutable black eyes. But he made no attempt to serve her.

Rhoda was scarcely conscious of the deference showed her, partly because she had received it so long, partly because that detached frame of mind of the hopeless invalid made the life about her seem shadowy and unreal. Nothing really mattered much. She lay back in her chair with the little wistful smile, the sombre light in her eyes that had become habitual to her.

After dinner was finished Katherine led the way to the living room. To his unspeakable pride, Rhoda took Billy Porter's arm and he guided her listless footsteps carefully, casting pitying glances on his less favored brother. Jack wheeled a Morris chair before the fireplace—desert nights are cool—and John DeWitt hurried for a shawl, while Katherine gave every one orders that no one heeded in the least.

Cartwell followed after the others, slowly lighted a cigarette, then seated himself at the piano. For the rest of the evening he made no attempt to join in the fragmentary conversation. Instead he was as self-absorbed as himself, touching the keys so gently that their notes seemed only the echo of his mellow voice. He sang bits of Spanish love songs, of Mexican lullabies. But for the most part he kept to Indian melodies—wistful love songs and chants that touched the listener with strange poignancy.

There was little talk among the group around the fire. The three men smoked peacefully. Katherine and Jack sat close to each other, on theavenport, content to be together. DeWitt lounged where he could watch Rhoda, as did Billy Porter, the latter hanging on every word and movement of this lovely, fragile being, as if he would carry forever in his heart the memory of her charm.

Rhoda herself watched the fire. She was tired, tired to the inmost fibre of her being. The only real desire left her was that she might crawl off somewhere and die in peace. But these good friends of hers had set their faces against the inevitable, and it was only decency to humor them. Once, quite unconsciously that she others were watching her, she lifted her hands and eyed them idly. They were almost transparent and shook a little. The group about the fire stirred slightly. John and Katherine and Jack remembered those shadowy hands when they had been rosy and full of warmth and tenderness. Billy Porter leaned across and with his hard brown palms pressed the trembling fingers down into the Ebers lap. She looked up in astonishment.

"Don't hold 'em so!" said Billy hoarsely. "I can't stand to see 'em!"

"They are pretty bad," said Rhoda, smiling. It was her rare, slow, unbecomingly smile. Porter swallowed audibly. Cartwell at the piano drifted from a Mohave lament to "La Paloma."

"The day that I left my home for the rolling sea,

I said, 'Mother dear, O pray to thy God for me.'
But 'er I set sail I went a fond love to take

Of Nina, who wept as if her poor heart would break!"

(To be continued.)

The Old Original Summer Hill Farm

Where you find the pure bred Oxford. We have for sale 150 head of registered ewes, 15 to 18 yearling rams, 50 ram heads and 50 ewe lambs, some choice show rams and ewes, all first class individuals and guaranteed pure bred.

PETER ARKELL & CO.,

Box 454

TEESWATER, ONT

Please Mention Farm & Dairy

The Makers' Corner

Butter and Cheese Makers are invited to send contributions to this department, to discuss matters relating to cheese making, and to suggest subjects for discussion.

Prevention of Mold in Butter

MOLDY butter has been especially prevalent on the market this year. And when the presence of mold results in cuts of two cents or even more on the pound, as was often the case this year, it deserves some looking into. If by any means this two cents extra per pound may be saved for the patron, it will mean a much more satisfactory milk check.

The most important causes of mold on butter seem to be the use of green tubs and poor liners. Even good packages, however, will fall to give satisfactory results if they are not properly prepared at the creamery. Work a start in the creamery, will then favor its growth by poor transportation service, delays in transit and in being held at too high temperature.

It is certainly false economy to use poor containers for the sake of the difference in cost. By only the best in tubs and packaging. A cut of two cents a pound on a 56-lb. tub will take away much more than may have been saved in using second grade packages.

In the New York Practice Review the following recommendations have been made for the prevention of mold on butter: In striving to prevent mold the creamery should first see that only clean, well-seasoned tubs are used; second, soak tubs (treated to preserve shape) in hot brine or steam thoroughly; third, paraffin tubs if facilities are provided; fourth, use some salt or brine in tubs before filling; fifth, use arrangements of good quality that have been stored in a clean dry place and that have been soaked in hot brine to kill spores; sixth, insert liners carefully, excluding air from between tub and liner; seventh, tighten tubs before packing and pack butter in solid. (If butter is made from pasteurized cream the danger of mold developing on the butter is lessened); eighth, store in a clean, cold refrigerator and chill well before shipping.

Westwood Dairy Meeting

“THERE will be a great shortage of competent men to act as cheesemakers in the near future,” said Mr. Pawlow, speaking at the District Dairy meeting at Westwood on November 21st. “The reason for this shortage will be that these companies do not pay high enough salaries to induce men to take up this profession.” The difficulty which has been experienced during the last few years in filling these positions is becoming more and more acute. And the remedy for the situation, according to Mr. Pawlow, is more money for the good men.

The attendance at this district dairy meeting was discouragingly small. This was due to the fact that the meeting did not receive sufficient advertising. The bills to advertise the meeting were sent to the wrong address and from the time at which the date was set there was not a chance to advertise the meeting in the district newspapers.

Mr. R. W. Ward, the Dairy Instructor for the District of Peterboro and Lindsay, in his district report stated that the time has now arrived when every factory should pass a resolution that all milk be delivered in prime condition and not above a certain tem-

perature. In justice to the best patrons such a course should be pursued by the different factories. Another drawback to the best sections is delivered too late at the factory.

“Makers mostly are making an honest effort to give right service,” said Mr. Ward, “but occasionally handicapped on account of labor being scarce, and high in price, also the high and uncertain prices of all the supplies for cheese-making. There seems to be a disposition on the part of makers to furnish only their own labor and time, and let the producers provide everything else, and under the opinion that it would be the better way as the temptation is very strong, and almost compulsory in some cases, of the supplies used, to the great loss of quantity and quality of cheese produced. Take for instance coagulants. There should be enough used to get a firm, perfect coagulation in 25 to 30 minutes, with a normal or right amount of acidity developed in the milk. In a great many cases this is being done. Too much acidity is being used, or too little coagulant being used, or a little of both being done, which causes serious loss to the producers, both in quantity and quality of their cheese.”

“This season has been very favorable to the producers from a monetary point of view. We thought last year a high record in prices, but this year’s average price will exceed last by fully .024 cents per lb. of cheese, and there seems to be no doubt in the minds of the best informed, that we will have good prices for all the dairy products that can be produced in this country for years to come.”

“The worst sanitary conditions I had to contend with was about the whey tanks, caused by tanks leaking, but mostly by them overflowing. This should not be, as whey is a valuable by-product for feed, when hoes are selling from 15 to 20 dollars per cwt. live weight.”

Mr. George Rothwell, of the Central Experimental Farm, gave a practical talk on breeding and feeding. This was enjoyed by the farmers present.

Mr. G. A. Gillespie was re-nominated unanimously to represent the district on the Eastern Ontario Dairymen’s Association Board of Directors. Except for the small attendance due to insufficient advertising the meeting was an interesting one.

We regret that we are unable to report very favorably on some samples of Canadian rennet extract received during the past season. They were defective in flavor and not reliable as curdling properties. We have some cheese on hand made with Canadian rennet extract which have gone wrong in flavor, while those made with Hansen’s rennet extract from the same lot of milk are still good in flavor. This is to be regretted, as it is desirable to encourage the manufacture of rennet extract in Canada. No doubt these defects will be overcome as the manufacturers gain experience.—J. A. Ruddick, Dominion Dairy Commissioner.

Murphy was at the hospital and had undergone an operation. As he was recovering he remarked to the patient on his right, “I am thankful that’s over.” “Oh!” exclaimed the patient, “at my operation the doctor left the scissors inside and I had to undergo the same again.” The patient on the left remarked that at his operation the sponge had been left and had to be gone over again. Just as they had finished talking the doctor appeared at the door and asked: “Has anyone had an operation?” “Yes,” said Murphy faintly. “What kind?”

When The Factory Closes

In a few weeks stores of the Cheese and Butter Factories over Ontario and Quebec will be closing for the season. At that time hundreds of the patrons of these will desire to form new connections for the shipping of their milk or cream. The following list of firms are in a position to handle large quantities. We suggest that you patronize them.

CREAM WANTED

We are in the market for Cream, both for churning and table use. Our guarantee assures you of—

- HIGHEST PRICES.
- ACCURATE RECORDS,
- PROMPT RETURNS
- AND SATISFACTION.
- ALL EXPRESS CHARGES ARE PAID AND CANS SUPPLIED.

Toronto Creamery Co., Ltd.

9 Church St., Toronto

MR. MILK PRODUCER—

If “Pigs is Pigs,” it doesn’t necessarily follow that cows are just cows. A cow is the product of “calf,” plus feed and attention. A calf which gets its nourishment from suckling its comrade’s ear will bring poverty not pride to its owner. The milk-fed calf is the kind from which 10,000 lbs. of milk and many other blessings will flow later on. “Ship the cream and feed the milk” is the up-to-date slogan of the successful dairyman.

Let us look after the cream end of it for you. We pay highest prices for good cream because we have a market for high-grade butter and cream.

VALLEY CREAMERY OF OTTAWA, LTD., 319 Sparks St., Ottawa, Ont.

CREAM WANTED

We want your cream for Buttermaking purposes. We buy by percentage of butter fat, and give a test of each individual shipment. Supply cans for shipping, and pay express from your nearest shipping station within 200 miles of Toronto or Prescott.

Our Prescott Branch will take care of all Eastern shippers. For further information write either Toronto or Prescott.

THE T. EATON CO. LIMITED
TORONTO CANADA

The Guelph Creamery

Needs More Churning Cream

Write for a five or an eight gallon can. Full statement returned with can each delivery. Cheques payable at par, issued twice per month.

This is the Creamery Satisfaction.

Guelph Ont.

FARMERS

You have bought your VICTORY BONDS

For the good of our Country Now, do not overlook the purchase of a

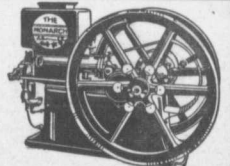
Monarch Engine

For the good of the farm.

These engines are made in all sizes from 1 1/2 h.p. to 30 h.p., making them suitable for pumping, grinding, wood-sawing, corn-cutting, straw-cutting, in fact everywhere that POWER is needed. The MONARCH ENGINE needs no coating, but is always ready for the job required. Our catalogues are free for the asking. DO NOT DELAY! Send a post card TO-DAY. THE FIVE POINTS OF SUPERIORITY WILL INTEREST YOU.

CANADIAN ENGINES, Limited, - Dunnville, Ont.

Sole Selling Agents in EASTERN ONTARIO, QUEBEC and MARITIME PROVINCES THE FROST & WOOD CO., Limited, Smith's Falls, Ont., Montreal, Que., St. John, N.B.



Safeguarding the Healthy Herd

(Continued from page 6.)

ions of such disinfectant at \$1 to \$2 per gallon is not to be compared with the loss of one animal from disease or a general outbreak of disease which might have been thus prevented. But this annual soaking and cleaning of floors is insufficient. All mangers, stanchions, feed passages and gutters should be sprayed at least once each week. A cheap knapsack spray pump useful elsewhere about the farm will guarantee a quick and thorough job. This is im-

portant and should be adopted by every dairyman who is determined to be rid of such infectious diseases as tuberculosis, abortion, etc.

Calf Rearing.

If by repeated tests the herd is proven free from tuberculosis then calf rearing is simplified. However, as long as there is one infected milch cow in the herd it is absolutely necessary to pasteurize all milk, whether it be whole or skim, which is fed to the calves. It is needless to add that the same precaution is necessary for humans, especially infants.

In addition to this if there is any

doubt as to the health of any one cow, it will pay to segregate all calves and as much as possible rear them away from the older animals.

Introducing New Animals into the Healthy Herd.

This is the greatest chance which a breeder can take and he must be ever extremely watchful and careful. The writer knows of more than one instance where animals suspected of disease were sent to other dairymen who afterwards suffered from an outbreak of disease.

Even more common are examples

of animals fat and healthy in appearance yet badly affected being introduced into the clean herd only to spread the disease. Also many common are examples of cows purchased on the tuberculin test reacting when again tested within four months and upon examination be found not only badly affected but sure spreaders of the disease.

Condition No Basis for Judgment.

These and similar well-known examples illustrate the facts that the condition of the animal is no sure basis of judging health. That tuberculin tests have their limitations and that it is possible to plug animals so that they may not react within a given time. For these reasons every farmer with a clean herd should rear his own heifers from his best cows, if they are good foundation animals, and of course sired by the very best pure bred bull available. However, it is necessary for every breeder to introduce new bulls regularly and if he is ambitious and progressive to introduce an occasional extra good female either pure bred or high grade. Consequently he must take certain risks, but should be prepared accordingly.

The purchasing of all animals over six months, subject to test and the isolation of all animals for three months or more and retesting before allowing these purchases with the main herd is the only means whereby the farmer may protect his healthy herd. In addition, however, all purchased calves under six months (excepting new born calves) should be so isolated until ready to test. This problem may not in all respects apply to the dairyman who is not rearing his own cows and whose milk is pasteurized before being distributed in the towns and cities, but to the farmer who is a breeder and whose milk is not pasteurized the above facts must receive most careful consideration.

Bean Threshing

BEAN THRESHERS naturally are more satisfactory for threshing beans than any other implement, but they are not necessarily the only machine which will do the work. Unless there are rather extensive fields of beans, it is better to use the common type of threshing machine. In using it the concaves should be removed and the cylinder run much slower than ordinarily.

It is not necessary that even a threshing machine be used for separating the beans from the pods. By putting the beans in a wagon box they can be tramped out very easily by walking over them and using a cement tamper, or they can be felled, or if one has a rather large, clean floor, they can be scattered over the floor, and a light roller dragged back and forth over them. To separate the beans from the straw one simply shakes the vines or straw with a fork; then the beans are winnowed in a strong current of wind, or run through a fanning mill.

THE RIGHT GIFT.

REMEMBER
This December,
That love weighs more
than gold!
Help us spread the news to
young and old;
Friendship bought and sold
Leaves the giver cold.
The right gift
Is the bright gift,
The kind thought and cheer;
Send your loving heart,
That's the greatest part,
So will Christmas crown all the
year!

—Josephine Daakam Bacon.



ARE YOU PREPARED

FOR THE

DAIRY STANDARDS ACT?

NOW IS THE TIME TO GET YOUR

AYRSHIRE BULL

Or the cows and heifers for your foundation Ayrshire herd at the

50
HEAD

FIFTH

Consignment Sale

50
HEAD

of

Pure Bred Ayrshire Cattle

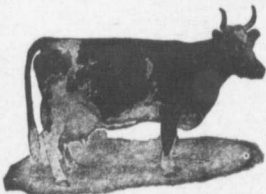
From the herds of the

Southern Counties Ayrshire Breeders' Club

to be held at

The Dr. Rudd Sale Stables, Woodstock, Ontario

December 19th, at 1 p.m.



JEAN ARMOUR, 15591
Record—20,174 lbs. Milk, 505 lbs. But-
ter. A District Bred Cow.

W. W. BALLANTYNE, President,
STRATFORD, ONT.

T. MERRITT MOORE,
AUCTIONEER.

THIS is the district from which the great producing Ayrshires are coming. Our offering consists of a richly bred lot of cows fresh in milk or due to freshen soon after the sale, together with heifers of all ages with breeding that spells production. A FEW CHOICE YOUNG BULLS will also be included. Come and secure some of the good ones for yourself. The club constitution absolutely prohibits all "by-bidding" or "bidding-in."
Terms—CASH, or CREDIT up to 6 months on bankable paper—with interest at 6 per cent.

Write to the Secretary for Catalogue.

JOHN McKEE, Sec.-Treas.
NORWICH, ONT.

QUALITY



TYPE



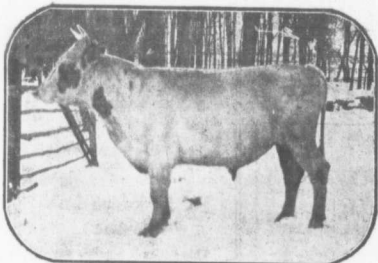
PRODUCTION

AYRSHIRES
BEAVER MEADOW
STOCK FARM

"LIKE BEGETS LIKE"

Carrie B.—No. 23658

Dam of Beaver Meadow Carrie 2nd. Granddam of Herd Bull. Mature record 14,341 lbs. milk, 681 lbs. butter fat in 1 year.



Herd Sire—BEAVER MEADOW CARRIE'S RELIANCE, No. 54829.
His Sire—Beaver Meadow Reliance, Dam Beaver Meadow Carrie 2nd.

Beaver Meadow Carrie 2nd

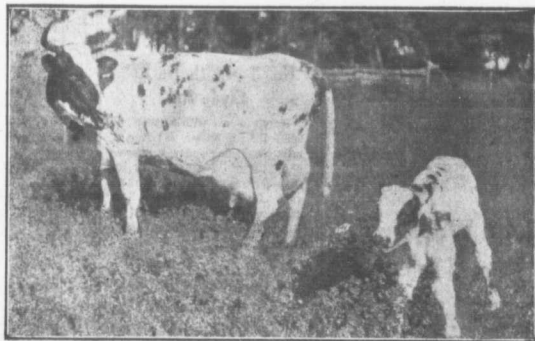
Dam of Herd Sire. Two-year-old record, 10,644 lbs. milk and 502 lbs. butter fat in 1 year, twice a day milking.

Get
This
Blood

In
Your
Herd

At Present I have for Sale the Following Young Bulls:

- No. 1.—Herd Sire—see centre cut.
- No. 2.—Young bull born Feb. 26, 1917—dam Beaver-Meadow Carrie 2nd.
- No. 3.—Bull calf born Mar. 6, 1917—dam Primrose of Beaver Meadow, 33930, who has a record at 2 years old of 12,350 lbs. milk, 463 lbs. butter fat, and whose dam is Daisy of Ferndale.



DAISY OF FERNDAL, 26735.

Dam of Beaver Meadow Reliance, 44116. Granddam of Herd Bull. 4-year-old record 15,534 lbs. milk, 590 lbs. butter fat in 1 year. Has also produced in E.O.P. 71,447 lbs. milk, 2,785 lbs. butter fat in 5 years and 5 months during which time she has dropped 6 healthy calves.

No. 4.—Bull calf (in lower cut), born Aug. 12, 1917—dam, Daisy of Ferndale.

These Bulls are All Sired by Primula Chief of Orkney, 50489

former herd sire, an excellent bull whose dam has a yearly record of 14,106 lbs. milk and 546 lbs. butter fat, and whose granddam has given 10,893 lbs. milk and 431 lbs. butter fat in 3-year-old class.

W. C. TULLY, Prop.



ATHELSTAN, QUE.

In Union There is Strength

United Farmers of Ontario Annual Convention

The program, as now arranged, is as follows:

- Wednesday, December 19th, 1917.**
 10 a.m.—Call to order and greetings. President R. H. Halbert.
 10.15—Appointment of Committees—Railway certificate, credentials, resolution.
 10.30—Reading minutes and communications.
 10.45—Reports of standing committees.
 11.00—Notice of motion: Peter Porter. Adjournment to 2 p.m.
 2 p.m.—Announcements; financial statement, Wm. McCrae, Guelph, Auditor.
 2.15—Report of Secretary-Treasurer, J. J. Morrison.
 2.30—President's address—R. H. Halbert.
 3.00—"Organization of the Young Men of our Industry," Jos. A. Snider, Prov. Sec'y of the J.F.I. Assoc.

"The Dignity of Our Calling," Percy Mulholland, York Co.

4.00—"Increased Production and Labor," W. A. Amos, Palmerston. Five minute addresses on local conditions by delegates. Adjournment to 8 p.m.
 8.00—"Formation and Development of Rural Opinion," W. L. Smith, J. N. Kernighan.

9.00—"Canadian Council of Agriculture," R. McKenzie, Winnipeg, C. W. Gurney.

Thursday, December 20th, 1917.

9 a.m.—Announcements.

9.30—Nomination of officers and directors.

10.30—"Ontario Farmers and Their Roads," Tr. E. Elliott, County Clerk, Peterboro. Questions and discussions. Adjournment to 2 p.m.

2 p.m.—Announcements. "Rural Producer and Urban Consumer," E. H. Stonehouse, President Milk Producers' Assoc. Discussion and questions.

2.45—"Price Fixing of Farm Products Only," R. W. E. Bornaaby, Jefferson.

3.30—Reports of committees and disposing of same.

4.00—Election of officers and directors.

5.00—"Pitfalls of Farmers' Business Organizations," John Kennedy, 2nd Vice-Pres. T.G.G., Ltd. Adjournment to 8 p.m.

8 p.m.—Business talk by L. H. Blatchford, Manager of U.F. Cooperative Co., Ltd.

8.30—Report of organizer, J. J. Morrison.

9.00—Business talk, A. A. Powers; New business.

Annual Meeting of U.F. Co.

THE fourth annual meeting of the United Farmers' Cooperative Co., Ltd., will be held on Friday, Dec. 21st, 1917, in the Labor Temple, 157 Church St., Toronto. It is open to all shareholders, secretaries and members of clubs. The program is as follows:

9 a.m.—Call to order and greetings.

Pres. B. C. Tucker.

9.15—Reading of minutes and announcements.

9.45—President's address, B. C. Tucker, Harold.

10.15—Financial statement, presented by Mr. A. J. Reynolds, Auditor.

10.30—Amendments to by-laws, Limer Lick.

11.30—Nomination of directors. Adjournment to 2 p.m.

2 p.m.—Announcements. "Commercial Law and Business Methods," Gordon Waldron. Questions by delegates.

3.00—Election of directors. "Progress of Company," R. W. E. Bornaaby, A. A. Powers. Adjournment to 8 p.m.

8 p.m.—Open forum.

Good Year at Omeceg

EDITOR, Farm and Dairy: The annual meeting of the Omeceg Farmers' Club was held on Thursday evening, Nov. 15th, and was well attended, there being about 75 men present. The secretary's report was called for and showed that goods purchased amounted to \$3,456.23, and many orders were placed by the secretary to be forwarded direct to the buyer. From September 12th, the date the club began shipping, there has been containing sheep and cattle sold for \$7,868.59; also several cars of hogs from Reaboro and Omeceg clubs valued at about \$20,000, during time from Sept. 12 to Nov. 5.

The report is encouraging, and the officers expect to report \$100,000 worth of business at the next annual meeting. They would also recommend all Farmers' Clubs or branches of the U.F.O. to do their own shipping and not only get larger profits immediately, but by the united effort may we not in time be able to say to politicians or to the Government, "This article costs so much, and we must have a fair profit; so we agree to raise hogs for a certain term for a fixed price." This can only be accomplished by united effort on the part of all clubs in the province, and may their number increase!

The officers elected for next year are as follows: President, Joseph Bradley; Vice-President, John Smith; Secretary, F. G. Sandy; Assistant Secretary, John White; Treasurer, Robert Boyd; Directors—W. Yeak, T. Wilbert, Fee, R. W. Wilson, B. Courtney—F. G. Sandy, Secretary.

Mr. Kennedy's Impressions

ONTARIO farmers will not soon forget the inspiration which was brought to their movement last summer by Mr. John Kennedy of the Grain Growers' Grain Company. Mr. Kennedy addressed a series of 30 meetings and on his return to the West spoke enthusiastically of the progress of the movement in Ontario. He is quoted in the Grain Growers' Guide as follows:

"I traveled over much of the same ground as a year ago. The attendance this year was three times what it was last year and the enthusiasm was certainly far more than trebled. Two things appealed specially to these Ontario farmers. First, my statements regarding the cost of distribution, and second, regarding our present income method of taxation. Westerners do not appreciate the rapidity of the change that is coming over rural Ontario's method of political thinking and the effect it will have in the very near future."

Mr. Roderick McKenzie, secretary of the Canadian Council of Agriculture, who also addressed a series of meetings in Ontario, reported similar impressions. Westerners expect much of the farmers' movement in the East.

For the fresh calved cow, no feed is as good as bran. Feed it in the form of a hot bran mash. Along with this the drinking water should be warmed for the first two or three days.

For the First Time!

TO MY FELLOW BREEDERS OF CANADA:

This is the first consignment of cattle ever made by Pine Grove Farms to a public sale held in Canada. I am glad of this opportunity to meet you. Glad of the opportunity that will enable me to know you all better. We are sending you some splendid animals. They all carry the Pine Grove Farms guarantee, and REMEMBER, we are going to send you a son of Rag Apple Korndyke 8th, "The Greatest Bull in the World," out of a 32-lb. dam.

I trust you will see that my confidence in you as progressive breeders is fully sustained and that this calf finds a home where his "greatness" may add materially to the Holstein interests of Ontario and put many dollars in the bank for the man who buys him.

Sincerely yours,
 OLIVER CABANA, JR.

A Son of the Mighty Rag Apple Korndyke 8th

Will head this, our first Canadian consignment. His dam is Onyx Clothide, whose record of 32.24 lbs. of butter in 7 days was made from 649.30 lbs. of milk. This is a cow we are sure is slated for still higher honors when she again freshens and the far-sighted breeder who takes home her young son will win his share of the increased value that is bound to follow. This grandly bred young sire, in addition to the four carefully selected animals described in the adjoining column.

Will be Sold at Welland, Ontario, Dec. 11th

This consignment will go absolutely without reserve. There is not an animal in the whole lot but that will prove a profitable investment for the man who buys it.

PINE GROVE FARMS
 Oliver Cabana, Jr. - Elma Center, N.Y.

No. 1---Uniform De Kol

A sister to the World's Champion junior three-year-old cow, Uniform Lorena, with a record of 37.48 lbs. of butter in 7 days. This splendid A.R.O. heifer is safely with calf to one of our greatest junior herd sires, King Pontiac Fayne Segs, and due to freshen in February.

No. 2---Roslyn Leila Pontiac

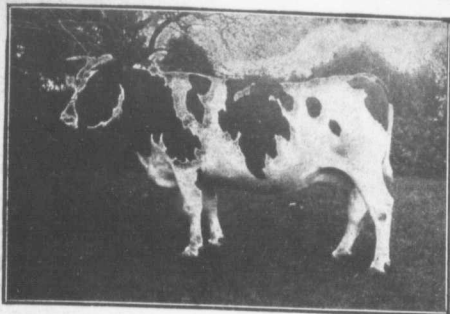
This heifer is not only exceedingly well bred, but is due in January to King Pontiac Fayne Segs, a son of King of the Pontiacs, and a 28-lb. four-year-old daughter of Segis Fayne Johanna, first and only cow in the world to make 59 lbs. of butter in a week.

No. 3---Lilith De Kol Clyde 2nd

Here's a cow with a record of 28.01 lbs. of butter, 481 lbs. of milk in 7 days, and a granddaughter of Woodcrest Nig De Kol, that great son of Hengerveld De Kol with 116 A.R.O. daughters. Safely with calf to one of our best young bulls. Great chance.

No. 4---Riddle Meadows Pearl Pontiac

A Show heifer, and bred in the purple. Her sire is a son of Fairview Korndyke Lad, whose dam was that great 37-lb. cow, Pontiac Pet, daughter of Pontiac Korndyke. This heifer is, in calf to King Pontiac Fayne Segs. She will surely please.



The Type For Foundation Females.

LUCY GREY DEKOL is one of the foundation females in the young herd of Mr. Arthur Becker, Watersburg, Ont. This is the kind of animal that young breeders should select for the future success of their herds. They have the constitution to make big records year after year.

Young or Old Bull—Which?

MOST breeders prefer to buy a young bull rather than an old one, in the opinion of a writer in the Berkshire World. However, both old and young have their advantages and disadvantages. The chief advantage of buying a young bull are as follows:

1. A young bull is easy to handle and he can be trained according to the method used by the purchaser.
2. The cost of transporting is small.
3. A young bull usually can be bought cheaper than one ready for service or mature.
4. There is less chance of buying

disease with a young bull than there is with a bull that has been in service.

5. A young bull can be fed so as to develop up to the limit of his ability.
 6. If a bull is bought young and proves to be especially valuable, he has a long period of usefulness before him.
- The chief disadvantages of buying a young bull are:
1. A young bull is untried and the buyer must wait about three years after he is old enough for service before his merit can be known.
 2. If a bull calf is bought one cannot be sure how he will develop. Some very nice looking calves develop into ungainly animals.

Important Factors.

The chief advantages of buying an old bull are:

1. It is possible to get a proved sire.
2. When an old bull is purchased his mature conformation is known.

The chief disadvantages of buying an old bull are:

1. An old bull is very likely to be vicious and hard to handle.
2. There is more chance of buying disease with a mature bull that has been in service for a number of years than in buying a young bull that has not been used.
3. If an old bull is to be shipped, the charges will amount to considerably more than those on a young bull.
4. An old bull may not last long.

Although all of the factors mentioned may have some influence with the purchaser of a bull, still the fact remains that what is most wanted in a herd sire is the ability to improve the productivity of the herd, and this ability can be detected with certainty in the tried bull. On the other hand, a person never can be sure of this ability in a young bull until he has been tried. The advantages are certainly in favor of the mature bull if he can be purchased at anything like a reasonable price.

Louise had made loud and repeated calls for more turkey at the Christmas dinner. After she had disposed of a liberal quantity she was told that too much turkey would make her sick. Looking wistfully at the fowl for a moment, she said: "Well, give me annuzzer piece and tioneed may have some influence with send for the doctor."

Forstercrest Farms



No. 1.—Bull born Dec. 2, 1917, from A. R. O. Dam, sired by RIVERSIDE SIR KOORNDYKE.
 No. 2.—Born March 21, 1917.
 No. 3.—Born September 9, 1917.
 The dams of Nos. 2 and 3 were sired by a son of LULU KEYES, 7-day record 36.5 lbs. butter; 30-day, 144.39 lbs. butter; milk, 122 lbs. 1 day.
 Will also sell a few cows sired by SIR OLIVER MEROENA, No. 5947.

Write for Particulars.

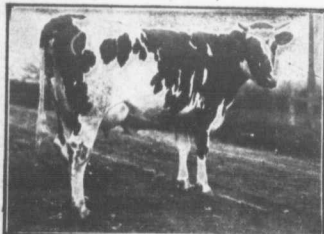
R. B. BROCK R.R. No. 5. SIMCOE, ONT.

Individuality---Breeding---Production

That which makes an animal outstanding—makes him or her worth the money to the owner—the outward visible proofs of constitution—ruggedness—type—all those qualities which can come only because of worthwhile sires and dams and which make the animal worthy of its ancestry. That is individuality as I see it and that is what I am planning to breed into every animal in the Heart's Delight herd.

Patience—constant watchfulness—intelligent, accurate record keeping—insisting to combine the greatest possible production with depth of constitution and artistic beauty of form. Such is my aim in breeding. It will take time—plenty of it. It costs money—lots of it. But it produces the animal that will make good either in my herd—or in a purchaser's hands.

We have built the foundation of our herd on strong, rugged stock, with the ability to produce large quantities from year to year. To this we add the genuine individuality of our females and sires, and the raising of all our animals under good firm conditions. No pampering. Health, ruggedness and endurance under continued heavy production are the certain results. This is our method.



Daisy Pamela Butter Girl

Note the strength and constitution of both these cows—both beautiful animals. D. P. B. Girl is just a 2-year-old, but has given in 6 months and 6 days, 6,255 lbs. milk, testing 2.85 per cent. Fat. E. G. Dekol is now just 5 years old. In R.O.P. in 7 weeks she has given 3,941 lbs. milk. They are a very fair type of what you may look for out of the Heart's Delight herd. Another

R. O. P.
 is the standard on which is based the work in our Herd



Eric Grey Dakol

2-year-old, Lily Pamela Butter Girl (page 26), has just made a little over 11,000 lbs. milk in 9 months in R.O.P. These are the sort of cows you want back of your stock. They have the constitutions to repeat again and again. They are persistent milkers, good breeders, good mothers, passing on their goodness to their offspring in full measure.

A Sire

We have only 1 young sire (2 months) to offer. He is a half-brother to Lily Pamela Butter Girl.

ARTHUR BECKER, Hearts Delight Farm Petersburg, Ontario.

R. R. 2

Feeding and Handling of Yearly Record Cows

Suggestions by W. A. McElroy, Dundas County, Ont.

ONE of the first essentials under the present labor conditions is efficiency. No doubt most breeders have found a great deal of extra labor involved in testing cows. It has not been my pleasure to see the methods of many of the best herdsmen; many I know are greatly lacking in efficiency, so I would say to any one intending to start cow testing to have everything arranged to do your work in the shortest time with the least exertion. Have everything convenient before undertaking long distance records; if you have not, in busy times important things will be neglected.

First in importance is the care of the cow. She will, being a dumb brute, become accustomed to most anything. Get her in the habit of receiving kindness and regularity in feeding, even in cleaning her and taking and bringing her from the pasture.

Our feeding methods have been very simple. Good clean wholesome food is more important than anything else; smutty and dusty grain is more likely to give a cow indigestion than too much. It is impossible to give a ration suitable to every cow giving different amounts of milk. We feed our heaviest producers a ration with the nutritive ratio one part of protein to 4.5 carbohydrates and fat, and the lighter ones one part protein to 5.5 c. and f.

For the convenience of those who are not accustomed to calculating a balanced ration, I would suggest the following:

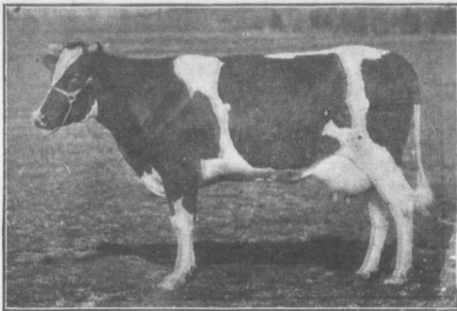
To calculate a balanced ration, you figure out the protein, the carbohydrates and fat in your feed. You multiply the fat by 2.5 and add it to the carbohydrates and divide the protein into what you get when you add the carbohydrates together and you get the nutritive ratio.

You will get the amounts of carbohydrates, protein and fat in 100 pounds of each of the feeds in the table in "Feeds and Feedings," pages 582 to 589, and when you know the amount in 100 lbs. it is an easy matter to figure the amounts in the quantity of the different feeds you are feeding.

Figure out the protein, carbohydrates and fat in each feed, add all the proteins together, carbohydrates together and the fats together. Multiply the amount of fat by 2.5, add it to the amount of carbohydrates and divide by the amount of protein and you can't go wrong. To get the nutritive ratio for cows giving different amounts of milk, look up the Wolf-Lehmann feeding standards, page 591, on milk cows. "1" is amount of protein; "6.7, 6.0, 5.7," etc., is amount of carbohydrates and fat. Every feeder should have Henry's "Feeds and Feedings."

A British Columbia Jersey Herd

"M"Y ideal of a good Jersey cow," said Mr. Grimmer of Grimmer Brothers, Pender Island, B.C., to an editor of Farm and Dairy who visited their herd last August, "is



One of the Long-Distance Performers in the Hillside Herd.

This is Queen Hortense, of Hillside, with an R.O.P. yearly production at 2 years and 22 days of 20,049 lbs. of milk and 663 lbs. of butter fat. Her dam is Lily DeKoi Lucknow, the Canadian R.O.P. champion, owned and bred by W. A. McElroy, Chesterville, Ont.

a cow that is just as large as it is possible to get her without being coarse. There are some Jersey breeders who in their desire to secure what they consider size and constitution overlook the fine points that are essential to a good Jersey cow. What we aim for is a combination of both, not a cow that is too small through breeding for fine points nor a cow that is too large and coarse through a desire to secure constitution and milk producing capacity. I might express it best by saying that I like a 'big

little' cow that is true to the Jersey type."

Grimmer Brothers have a herd that for some years has been recognized as one of the best in British Columbia. Pender Island is a small island lying between the southern mainland of British Columbia and Vancouver Island; it being about ten miles from the latter. The climatic conditions are apparently ideal for the breeding of Jerseys. Another good Jersey herd on the island is that of Mr. Menzies, which was visited and

941.25 Lbs. Posch Queen Wayne	1043.75 Lbs. Baroness Madoline	827.5 Lbs. Grace Pledge DeKoi	1123.5 Lbs. Madam Posch Pauline	1048.75 Lbs. Desta	1042.05 Lbs. May Echo
1057.5 Lbs. Totilla of Riverside	1113.25 Lbs. Rauwerd Count DeKoi Lady Pauline	1008.47 Lbs. May Echo-Posch	1044.45 Lbs. Plus Pontiac Artis	986.25 Lbs. Hill-Crest Pontiac Vale	1041.25 Lbs. Mercena Calamity Posch
Calamity Johanna Nig	1007.5 Lbs. Calamity Johanna Nig	1173.66 Lbs. Lady Pietje Canary's Jewel	1051.25 Lbs. Lillie DeKoi Lucknow	1130.0 Lbs. Evergreen March	

THESE 16 CANADIAN HOLSTEIN COWS
Produced as much butter as 100 average cows.



described by our editor last year in Farm and Dairy. Grimmer Brothers' herd consists of 7 purebreds and four grades of which 15 to 18 were milking at the time of our visit. The cream is sent to the Salt Springs Creamery and some of it is sold in Victoria.

The herd was started by Washington Grimmer, who kept grade cattle for some nine years. Mr. Grimmer's two sons, Neptune and Percy, when they got old enough to begin to take a hand in the management of the farm, decided that they would like to get a start with purebreds. They bought two, one, Lily of Brampton and the other Anona, the latter being purchased from A. J. Street of Chilliwack, B. C. This cow has a B.O.P. record of 11200 lbs. of milk and 584 lbs. of fat. Since then they have purchased Brampton Mariposa, with a record of 9620 lbs. of milk and 558 lbs. of fat. A nice type of a cow, she has proved a consistent performer. They have also secured Brampton Garbozelea. The latter animal, which is now dead, made a record of 8000 lbs. of milk and 387 lbs. of fat. Anona was shown on a number of occasions, winning first and the championship at the Vancouver Exhibition for three years in succession. Quite a lot of her young stock is now in the herd. This one showed at Victoria and New Westminster.

Grimmer Brothers have a nice comfortable stable for their stock, which at the time of our visit last summer were noticed to be in thrifty, working condition. They are giving the herd good management and appear to be reaping corresponding results.

Protect Teats and Udder

By W. H. Reynolds.

PREVENTION of injury to cows' teats is most important. Injury may be caused by dragging over high door sills, by hurrying the cows from pasture when the udder is full, and by allowing them to lie on cold, bare cement floors. The teats, especially the hind teats of low-hanging udders, are sometimes injured between

the cows' hocks and the floor when the cow rises.

If the injury is slight, there may be only a bit of dry blood on the end of the teat and the cow may be a little harder to milk than usual. Such cases usually heal promptly, but if the bruised end becomes infected the teat canal and the udder may become inflamed. Sometimes the end of the milk duct is permanently damaged. A severe bruise may result from a teat's being stepped on by a cow in a neighboring stall, while the cow is lying down, and if she jumps up suddenly actual tearing may result.

The treatment varies greatly according to the case. Conservative treatment will often save teats that are only slightly injured. Long continued bathing with hot water and gentle massage, if given early, will often open a closed canal. Much less damage may result from leaving milk in an injured quarter for twelve or even twenty-four hours than from an attempt to force open the end of an injured teat with a milk tube or probe. When teats are badly damaged a competent veterinarian should be called.

Repeating "chilling of cows' udders, especially by washing and then exposing them to the cold air, often causes trouble, says Dr. Reynolds. The canal becomes partially blocked, making milking difficult. Small masses of fatty material appear in the milk. In some cases the end of the canal is partly or wholly closed by a scablike formation. Considerable irritation of the skin, particularly around the base of the teats, will usually be noticed. The remedy is, of course, a different method of cleaning the udder, in cold weather.

Willie was small, but he had learned that big things are achieved by dealing with matters in the mass instead of in detail.

"Now," he said to his mother; shortly before Christmas, "I've written a letter asking for what I want, and I think it covers everything."

"That's good," said his mother; "what did you ask for?"

"Two toy ships and a candy store."

HOLSTEINS AT WELLAND

Below are to be found a list of our consignors and their offering. We want lovers of Holsteins to know the men and the quality of herds in our annual sales. Get a catalogue from the Secretary, or write personally to any of our breeders about their offerings.

W. L. HOUCK, SECRETARY BLACK CREEK, ONT.

Plan to Spend a Day at Welland and attend the Sale to be held on December 11th, 1917

I am contributing the following females:—
No. 1.—Hulda Dekol of Riverside 2nd, a 12-ib. 2-year-old daughter of PRINCE DEKOL POSCH. She will freshen shortly after the sale.
No. 2.—A daughter of JORIE BRUNTING POSCH, sired by a son of COUNT HENGEVELD PAYNE DEKOL, will be fresh, and is a good one.
No. 3.—A 3-year-old, untested, but a good one. Her dam is a 16-ib. 2-year-old daughter of SIR SYLVIA POSCH.
No. 4.—ALTONA FALK, a nice type of cow testing over 4 per cent. butter fat. Butter at 2 years, 10.60.
No. 5.—LADY DEKOL PAYNE, a nice 2-year-old, untested.
All the above are bred to KING JOHANNA NETHERLAND, a son of JOHANNA NETHERLAND BISS 2nd, a 23-1/2-ib. cow, milking 130 lbs. per day.
Write to the Secretary for a Catalogue.

J. W. MOOTE CANBORO, ONT.

MAPLE LEAF STOCK FARM

at present offers a few sons of KING SEGIS ALCARTRA SPOFFORD
Owned by Leavens and Purdie and W. L. Shaw.
Their dams are daughters of

SIR COUNT SEGIS WALKER PEITERTJE
who has 6 daughters with records over 100 lbs. milk in 1 day and who average over 30 lbs. butter in 7 days. Two with world records.
Write for Pedigrees or Come and See.

WM. H. GOUGH & SON Bloomfield, Ont.

CRYSTAL SPRING STOCK FARM

R. of P. HIGH CLASS HOLSTEINS R. of M.

HERD HEADED BY
SIR ECHO SYLVIA

WHOSE SIRE IS
INCA SYLVIA BEETS POSCH - Dam - MAY DARKNESS ECHO
Herd has won many prizes at large fairs

Oxford Sheep, White Holland Turkeys, White Wyandotte Hens

D. A. McPHEE VANKLEEK HILL, ONT.

Canada's Greatest Quality

SALE OF PURE BRED HOLSTEINS

By Public Auction

TUESDAY, DECEMBER 11th, 1917, at 1 p.m. Sharp.

AT

THE FAIR GROUNDS, WELLAND, ONT.



All animals selected from the best herds in the peninsula.

50 HEAD

REGISTERED HOLSTEINS

50 HEAD

This is the First Pure-bred Holstein sale to be held in the Niagara Peninsula. Its promoters are anxious to make it a quality sale that will establish a reputation for the cattle of their locality and every contributor is putting in a consignment that he believes will be a good advertisement for his herd. All animals 6 months old and over will be sold, guaranteed to stand the tuberculin test.

The character of the sale is indicated by the reputation of the consignors.

All railroad lines run into Welland.

Catalogues are ready—Write for one to-day.

NIAGARA PENINSULA HOLSTEIN-FRIESIAN CLUB

to
W. L. HOUCK,
Secretary,
Black Creek, Ont.

Auctioneers:—E. E. Tseger, Algonquin, Ill.; E. Misener, Welland, Ont.; E. M. Hastings—In the box

Xmas Greetings

to fellow-breeders and readers of Farm & Dairy

RIVERSIDE HOLSTEINS

are in great demand

Over \$3000 worth of Live Stock sold in past six months.

Present Offering:

Bulls! Bulls! Bulls!

J. W. RICHARDSON

Caledonia, Ont.

Elgin County

Pure Bred **HOLSTEIN** Breeders

2nd Annual Consignment Sale



Registered Holstein Friesian Cattle

55 HEAD 55

Tuesday, December 18th, 1917

at
Durdle's Feed Barn, St. Thomas, Ont.

This is a rare opportunity for Holstein breeders or new beginners to secure some of the best blood of the breed. The stock are from, or bred to, such bulls as the following—

KING REGIS DERKOL CALAMITY, whose dam as a junior 3-year-old made 26.83 lbs. butter, 523.1 lbs. milk in 7 days.

SALGASTIC WAYNE DERKOL, whose two nearest dams average 26.59 lbs. butter in 7 days.

FAYNE REGIS NORMAN, whose two nearest dams average 27.90 lbs. butter in 7 days.

PENDERBINE KING MAY FAYNE a 34-lb. bull.

ROYALTON KORNDYKE MAJOR, who is closely related to the \$53,200 bull and Pontiac Korndyke. His dam gave 111.1 lbs. milk in 1 day.

ORMSBY HAYTGO, whose two nearest dams average 28.05 lbs. butter in 7 days.

SEE COLANTYLA WAYNE, sire of six R. O. M. daughters.

KING REGIS PIETERTJE, a 20.51-lb. bull.

PALADIN ORMSBY has 19 R. O. M. daughters.

Many of the females will be fresh or springers with records or from record stock.

CATALOGUES NOW READY.

L. H. Lipsit, Manager, Stratfordville, Ont.

Lock & McLaughlin, (Auctioneers) St. Thomas, Ont.

E. C. Gilbert, (Secretary), R. R. No. 2, St. Thomas, Ont.

Shall We Consider Color in Breeding Operations?

A Review of Color Fad Influence in Breed Development.—By "Oxford."

"THESE are three things to consider in selecting a herd sire—breeding, conformation and color."

The above is quoted from one of the best-known writers on Holstein-Friesian subjects in America. No one will quarrel with his first two considerations—breeding and conformation. A really desirable herd sire must be bred from high-producing ancestry, and as an individual he must have type, quality and character, all of which must be summed up in the one word "conformation." The third point, however, is more open to question. Should we consider color in selecting a herd sire? Before stating any personal beliefs that I may have, let us review the relationship of color fancies to the development of different breeds of cattle.

In this connection we can afford to study the history of several of the best breeds. In my reading of breed history I find that the Hereford got off to an easy first start among the beef breeds of Great Britain. Herefords themselves, however, divided themselves into three camps. All three were agreed as to the general type of the Hereford, but each of the three groups championed a different color. While these three factions fought each other and held back the development of the breed, the Shorthorns had gotten off to such a good start that they have never been overtaken. Hereford fanciers are now ready to admit that this early color fight is the most serious setback that the breed has ever received.

Shorthorn Color Fancies.

Even the Shorthorn breed, though it owed its first good start, in part at least, to the color feud of a rival breed, has not itself been immune from color fancies. Reds, whites and grays have all had their day, public opinion first demanding a red Shorthorn, then a white, and now a roan. The tendency has always been, when reds were popular, for instance, to keep as breeding stock red animals that had no right to go anywhere but to the block. The same when whites and grays were in favor; undesirable animals propagated their kind. These color fads in the Shorthorn breed have never been carried far enough to be very serious in their influence, but they have undeniably hindered the best development of the breed.

The dairy breeds, with only one or two exceptions, have been subject to the influence of color fancies. In Jersey, for instance, light strains have been in greatest demand in several periods, and dark shades of fawn have been equally popular at other periods. So swiftly did public favor change in the case of the Jersey breed, that at one time in the United States practically all of the larger breeders were compelled to develop and maintain both dark and light strains in order to cater to changing fancies. The hindrance that these fancies placed on real, intensive breeding work is easily imagined. Through all of these years white markings on Jersey cows were under the ban, although white is one of the breed colors on the Island of Jersey. As a result of the unpopularity of white markings, an animal so marked had to be very good before it was kept. This rigid selection, brought about by public demand for other colors, led to a tremendous improvement in those strains which were subject to white markings, and the evident superiority of many Jerseys, badly marked, has done much to overcome the prejudice

markings. This, of course, has been good for the breed, but any good accomplished by a color fad in this direction, has been far more than counterbalanced by the thousands of scrub pure-breds that were saved simply because they happened to be of the color fashionable at that time. Jersey breeders, however, seem to have learned their lesson, and although solid colors are still preferred, little stress is placed on the particular shade of fawn that an animal happens to have.

Ayrshire and Holstein Tendencies.

When I come to discuss color tendencies in the Ayrshire and Holstein breeds, I recognize that I am getting on dangerous ground, as these are the two breeds most largely represented in Canada, and certainly in Oxford county. In both of these breeds, however, there is a tendency to favor light colors. I have read dozens of advertisements in both Holstein and Ayrshire columns in which cattle offered for sale are recommended as being three-quarters white or almost all white. I have seen many letters from breeders inquiring about stock offered for sale, and the emphasis is always placed on light colors. This tendency to favor certain colors has proved, as we have already seen, dangerous in all other breeds. I see no reason why a color fad should not be as great a hindrance to the development of Ayrshire or Holstein breeds as it already has been in the development of other breeds that have been with us longer.

Certainly, nature did not intend that greatness in a dairy cow. Like beauty, color is only skin deep. Many of the greatest cows in the Holstein breed, such as Rauwerd and her great daughter Countess, are decidedly strong on the black, but more like Sky-lark Ormsby, are fairly well divided between black and white, but still with black predominating. In fact, it is noticeable that few of the really great producers of the Holstein breed are of a color that would place them in the height of fashion. At the present time I can think of only one world champion producer that is largely white.

Ayrshire Quality and Color.

In Ayrshires the same is true. Nature, in some way or other, failed to select popularly-marked animals to clothe them with world's records, or even such conformation as to recommend them for high placing in the show ring. Old Jean Armour, probably the greatest Ayrshire cow ever bred in Canada, was decidedly strong on the red. Auchencrain Brown Kate 4th, a champion yearly producer was almost equally strong in red markings. Auchencrain Fanny 9th, almost invincible in the show ring because of her splendid type and dairy quality, was not light enough to be called fashionable. Milkenzie Ormsby is one of the old red Ayrshires. And so we might go on mentioning famous Ayrshires that have been more red than white. Of course there are exceptions. Garlaugh May Mischief, Mountala Luss and Eileen are strongly white, while Grandview Rose is about equally divided between red and white. In Ayrshires, evidently, a white hide is no indication of producing ability or ideal conformation.

Every breeder must lay a certain amount of emphasis on color. Certain colors have been established for each of the dairy breeds, and it is necessary that all animals registered conform to these colors. It is false

(Continued on page 56.)

Women and Children Urgently Need Food

There is a serious shortage of food in Britain, France and Italy, and stringent food regulations are in force.

The enormous demands of the armies for food must be supplied. Soldiers cannot fight to victory on empty stomachs.

And the women and children overseas! They must not be denied the urgently needed food.

The Allies look to United States and Canada to meet the critical situation. Increased production of grains, beef and hogs—particularly hogs—is a military necessity.

European Herds Decreasing

At the present time, there are 115,000,000 fewer animals in the herds of Europe than before the war. In hogs alone, there is a shortage of 32,425,000.

Realizing the urgency of the situation, the Governments of the United States and Canada are doing their utmost to secure increased production.

The Dominion Government is co-operating with the Provincial Governments to get every province to largely increase its production of hogs in 1918.

Steps have been taken both to safeguard and encourage the producers.

Government Control

The Packing Houses are now under Government control and their profits are restricted. The hog producer is assured *his fair share* of the price paid by the consumer.

The Flour Mills are under a form of license and will be operated with restrictions on profits. Bran and shorts will be available at reasonable prices.

This year's huge United States corn crop will be available to Canadian producers. It is estimated

at 600,000,000 bushels greater than last year's and there will be a large surplus for export. This corn crop is under effective United States Government control to prevent speculation.

The buying of the meat for the Allies will all be done by the one commission representing the Allies, which will be an influence in stabilizing the market and preventing wide fluctuations in price. This fact, considered in association with the great meat shortage in Europe, justifies confidence in the profitable possibilities of hog raising in 1918.

Every Pound of Pork Needed

Every pound of pork that can be raised is urgently needed. The troops alone must have millions and millions of pounds of bacon, the British Army ration calling for $\frac{1}{4}$ pound of bacon per man per day.

The people of Canada are heart and soul with the heroic boys fighting and toiling in the mud, rain, snow and cold on the European battlefields.

The women and children of Britain who have sacrificed so much, those of France who have done men's work in factories and fields, and those of Italy, which is now suffering invasion by the German despoilers, all of these, as well as the soldiers need a vast quantity of food that only Canada and United States can supply by greatly increased production.

Save the Young Sows

Young sows which are slaughtered now only produce about 150 pounds of meat per sow. Each one that is bred will produce many times that quantity of meat in 1918.

Dominion of Canada Department of Agriculture

LIVE STOCK BRANCH
OTTAWA

Shall We Consider Color in Breeding Operations

(Continued from page 48.)

Inside of these limits that are dangerous. When the market demands animals of a particular color, the breeder who makes his living as a breeder, must consider what the market demands. It is always regrettable, however, that this is so, as color fads are apt to be imposed on real breeders by wealthy dabblers in farming and stock breeding. Fortunately, I cannot say that I have ever seen judges allow themselves to be influenced in the show ring by the color of the animals they were placing. The time may come, however, if color fads are allowed to go too far, when they will influence even show ring placings. I am hopeful, however, that the steady growth in popularity of both official and semi-official tests of a standard by which to judge dairy cattle, will tend to counterbalance the preference in favor of light breeds. In order to get the opinions of others besides myself on this subject, I wrote to Mr. M. H. Haley, in Oxford county, and A. D. Foster and Sons, in Prince Edward county, for their opinion. Mr. Haley replies as follows:

M. H. Haley on Colors.

"In my breeding operations I have not considered color very much. In purchasing a male the first thing to consider is type, and then pedigree, and lastly, color; for, without doubt, if we get type and good records the color will be all right. It does not appear to me that the desire for light colors is working any injury to the breed. The majority of enquiries that we get from those just starting on the pure-bred business, or those with grade cattle wanting a male, desire something light or well marked, and those that have been in the business for some time don't seem to be so particular about the color. If I should find my herd getting too light I would try to get a dark male, and the same, on the other hand, if the herd was getting dark I would try and get a light-colored male. Most any color for me, except those with the little black spots; we sometimes call them speckled."

From A. D. Foster & Sons.

"In our opinion color is last thing to consider in a good animal. Color has little or no bearing on the ability to perform. The breeder who takes the pains to establish a uniform color is liable to be a long time producing a champion. We can call to mind very

WHY "Ormsby Jane Burke"

Our Junior Herd Sire

Because

The average of his dam ("Victoria Burke" 31.30, twice a 30-lb. cow with 103 lbs. milk in one day), his sire's dam ("Ormsby Jane Segie Aaggie," 46.33 with 879 lbs. milk in 7 days), his grand sire's dam ("Small Hopes Fiebe," 30.82, 104 lbs. in one day), and his great-grand sire's dam ("Aaggie Cornucopia Pauline," 34.82, 114 lbs. one day, world's record 3 years), are not equalled by any other bull in Canada. Average for the 4, 35.69 with 115 lbs. milk in one day.

Because

His sire's dam, "Ormsby Jane Segie Aaggie," 46.33, is the only cow with 2 butter records over 40 lbs. (her average 45.11), the only cow to make 566.98 lbs. in 100 days, which record is 78.97 lbs. ahead of any other cow. She did it as a four-year-old.

A limited number of cows booked after April 1st.

R. M. HOLBY

Myrtle C.P.R.

Manchester G.T.R.

Part Perry

R.R. No. 4

35 Auction Sale 35

Head — OF — Head

Pure Bred Holsteins

— AT —

BROOKSIDE FARM, at GORRIE, ONT.

— ON —

Friday, December 14th, 1917, at 1 P.M.

Here is an opportunity to buy a sire good enough to head almost any herd or to lay a foundation for a first-class herd of pure-bred milkers. Start right and you are always right.

I am offering a son of a 10,000-lb. milk daughter of the famous old sire JOHANNNA RUE 4th's LAD, who carried 87½ per cent. blood of COLANTHEA JOHANNNA LAD, Field's great 41,000 bull. Also several of her daughters and granddaughters.

My herd combines the blood of the Johannas, Kornyses, Veemans, Waynes, etc. Write for a Catalogue. Lunch free. Trains met on day of sale at GOWANSTOWN, G. T. R., and FORDWICH, C. P. R.

W. L. LAMBKIN, R. R. No. 2, GORRIE, ONT.

few cases where cows of uniform color lead. However, we would breed to a bull of uniform color, providing he was of the right type and had satisfactory record ancestry. We can see no reason why light-colored cattle should do any harm, providing they be producers of the right type. The last four bulls used on our herd have been two extremely white bulls, one extremely black bull, and one over two-thirds black. We used these bulls, first, because of their type; second, record ancestry; third, because they suited us. We think color is, as we said, the last consideration. A good animal should never be turned down because extremely white or extremely black."

In conclusion: I am not conceited enough to set myself up as a dictator of what breeders shall emphasize and what they shall avoid. In these few paragraphs I have merely endeavored to picture the influence of color factors in other breeds and indicate the danger of a fad when it becomes a mania with breeders.

A B.C. Opinion.

Shannon Bros., the well-known Holstein men of Cloverdale, B.C., state their opinion in a few words as follows:

"We think the desire for light colors has worked a great deal of injury to our breed. Some breeders have lost sight of the utility of an animal on account of its color. In our own breeding operations we look for individuality, regardless of color. In selecting a sire we would not consider color at all, if we can get one with the right breeding and individuality.

The well-fed cow will return more profit than the poorly-fed one. A poorly-fed cow will often be found to give no profit. At the Ohio Experiment Station, a cow increased her milk production 80% through better feeding. This increased quantity of milk cost seventy-seven cents less per hundred pounds than what she produced on the small quantity of feed, and the butter fat cost twenty-three cents less per pound. This extra feed would not have been sufficient to feed another cow. By feeding the one cow well, about as much milk is secured as by feeding two cows poorly. And feeding the one cow well required less work, less barn room, less feed and less pasture. In many cases the quickest way to increase the profits from a herd is to feed and care for them better rather than by increasing the number.

OXFORD BREEDERS

Registered
60 Head High Class

Consignment
Sale

60 Head

HOLSTEINS

HOLSTEINS

— AT —

— ON —

Woodstock, Wed., Dec. 12, 1917

This is a rare opportunity for dairy men to secure some of the best producing blood of the breed. Most of the females are fresh or springers, well grown and developed, with records, or from record dams. We are offering some males fit for service, from dams up to 33 lbs. butter and over 100 lbs. milk a day.

Auctioneers,

MOORE & DEAN.

Our Motto is: QUALITY & SATISFACTION

M. L. HALEY, Springford, Manager.

For Catalogues write
W. E. THOMSON,
Woodstock, Ont.

Three Sections for R.O.P.

"I THINK it would be a very great mistake to change the length of the Record of Performance test," remarked Mr. L. H. Lipsit, of Stratfordville, in talking over the subject with an editor of Farm and Dairy in Hamilton recently. "Even as it is at present we cannot compete with the United States breeders in our test work on animals of the same quality. They have no breeding limits, either before or during the test. Also they are better feeders than we are. We haven't the men in the business here in Canada who will put the time and energy into it that they do. Our breeders are also farmers, and have to spread themselves out more." In this connection Mr. Lipsit mentioned several cases of breeding establishments in the United States that paid their herdsmen a salary of \$2,000 a year and allowed him commissions besides on records made. He also recognized, however, that the present system has its weaknesses.

"I know," said he, "that the 10 months' record is the real record for the commercial dairymen. It looks to me as though there should be three different sections for the R.O.P. test. In one section there would be listed the records made in 10 months with calving in 13 months, another section would be arranged as at present with a 12 months' record and 15 months for freshening, and another section would call for a 12 months' record without breeding limitations.

"Under present conditions a man gets his cow in condition for a test. He wants to go the limit, but he must practically make his record in the first six months. If his cow fails to breed the first time it may throw him out of the Canadian record altogether. With a third class I have suggested, however, he could go on



SEGIS MERCENA POSCH

Canadian Champion Senior 2-year-old Milk Producer

65.6 lbs. milk in 1 day, 636.6 lbs. milk in 7 days, 2,533 lbs. milk 30 days, 23.6 lbs. butter in 7 days, 94.3 lbs. butter 30 days.
I am offering this grand young cow for sale, together with her full sister, FLOREA MERCENA SEGIS, 59 lbs. milk in 1 day, 282.3 lbs. in 7 days, 1,223 lbs. 30 days, 14.33 lbs. butter in 7 days, 58.45 lbs. butter in 30 days at 1 year and 11 months old. Also several HALF SISTERS of the above cow, and CORNUCOPIA SYLVIA BRETTS, whose dam is sister to the world's champion MAY ECHO SYLVIA. This young cow has a 3-year-old record of 87 lbs. milk in 1 day, 674.3 lbs. in 7 days, 2,343.5 lbs. 30 days, 23.61 lbs. butter 7 days, 94.69 lbs. butter 30 days. She is also in R. O. P. Other E. O. E. and R. O. M. cows at special prices. Also my herd sire,

SEGIS HENGERVELD OTTILE

3½ years old, brother to MAY ECHO SYLVIA, and his dam has two sisters with world's records. For foundation stock try the Hay Hay Holsteins.

CORRESPONDENCE SOLICITED.

L. F. BOGART, R. R. No. 3 NAPANEE, ONT.

and quality. I would always have the condition, though, that the cow must be bred and freshen again, and the date of calving published as a part of the report.

"Thirty thousand pounds of milk is 30,000 pounds of milk, no matter how you get it," said Mr. Lipsit in conclusion, "and our breeders in search of a sire will favor that 30,000-lb. record. Here is where the Canadian breeder is at a disadvantage. I believe, too, that if we can make records to compare favorably with United States records that their breeders will pay us favorable prices."

Would Favor a Change

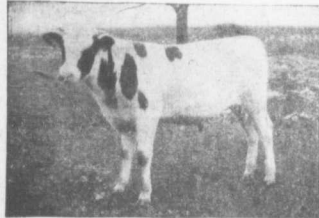
TWELVE months is the established length of the R.O.P. test, and for that reason it is hard to talk against it. I am satisfied in my own mind, however, that a change to a 10 months' test with 13 months calving would be better for the cow and for the generation of cows. My experience has been that a cow milking 10 months is quite long enough."

In these words V. L. Stansell, of Elgin county, recently stated his belief that a change was desirable in Record of Performance regulations. "There is a distinct danger," he said, "of continuous testing and deferred breeding leading to irregular freshening. If a cow freshens every 12 months it is easy to keep her freshening in that period, as it is the natural length of the lactation period. Break into nature's plan and irregular breeding may become a habit."

Present world conditions also, in Mr. Stansell's opinion, are an argument for a change. "We need the live stock," said he, "and by having the cows freshen every 12 months we get it. For this reason alone I would favor a change in Record of Performance regulations."

VILLA VIEW HOLSTEINS

Study
This
Combination
of
Breeding



Dutchland Pontiac Colantha, "29938"



King Segis Alcartra Calamity Tidy DeKol "39521"

JUNIOR HERD SIRE

Seven-day records are good; thirty-day records are better; yearly records are the only true indication of a cow's production. That's why we paid \$3,000 for DUTCHLAND PONTIAC COLANTHA. His dam at 3 years and one month made a world's record of 946.71 lbs. butter and 31,229 lbs. milk in one year. This was world's butter record when made, by nearly 100 lbs. Her dam, READY CHANGE, made 31 lbs. butter in seven days and 110 lbs. milk in one day, and over 3,200 lbs. milk in 30 days, a world's record when made. Her dam, CHANGELENG, the first cow of the breed to produce 100 lbs. milk, and produce a daughter to give over 100 lbs. in one day. She has also produced a son that has produced a 44-lb. daughter.

DUTCHLAND PONTIAC COLANTHA'S sire's dam has a yearly record of 27,625 lbs. milk and 1,082 lbs. butter. Her dam, CIRCUMPELLIE VALE, gave 29,591 lbs. milk, 1,155 lbs. butter in one year. Her dam gave 29,780 lbs. milk in one year.

DUTCHLAND is the only bull in the world (except his full brother), whose three generation dams (on both sire's and dam's side) average 104 lbs. milk in one day, and over 700 lbs. in seven days, and whose ten nearest dams average around 30 lbs. butter from 670 lbs. milk in 7 days. The only bull that can show on a five generation pedigree SEVEN ANIMALS IN THE DIRECT LINE of descendants that have each made A WORLD'S RECORD. Besides his wonderful breeding, "Dutch" is almost perfect as an individual. Send for his extended pedigree.

WRITE TODAY FOR PRICES ON YOUNG BULLS

ARBOGAST BROS. . . . SEBRINGVILLE, ONT.

Here's Records and Breeding!

THE BRAESIDE STOCK FARM

are contributing 10 HEAD 8 FEMALES
to the BRANTFORD SALE

December 19th, 1917

They include:—

- 1.—A excellent grand-daughters of PONTIAC KORNDYKE. These will feature just before the sale—in January.
- 2.—Eva Beatrice (No. 1), 25.0 lbs., 108 lbs., 30 days, 4 per cent. fat; strong and true in every way.
- 3.—Sires—Two sons of above cow. Backed and bred right. They are choice ones.
- 4.—A 23.5-lbs. heifer—a grand-daughter of COLANTHA JOHANNNA LAD.
- 5.—A daughter of above by Butter Baron, a son of the once Canadian Champion, Butter Baron, 33 lbs.
- 6.—Teakie May (No. 1)—A show cow as yet untested.

Get a catalogue and look up their blood lines—then inspect them in the stables at the sale.

Chas. Haviland & Sons, Breaside WILSONVILLE, ONT.
Stock Farm

YOUR ATTENTION!

My offering to the Brantford sale consists of 7 choice females, mostly all in calf to my herd sire, KING FOREST OF POLIBEST RIDGE 10th, whose dam and sire's dam gave over 20 lbs. butter in 7 days.

A grand-daughter of PONTIAC KORNDYKE from a 23-lb. 3-year-old dam.

A cow, mostly white, in calf to a son of KING REGIS PONTIAC KORNDYKE, the \$35,000 bull, and others, equally as good.

E. C. CHAMBERS, Fairview Stock Farm, R. R. No. 1, HATCHLEY, ONT.

Breeding Production Individuality

are what all good breeders are aiming for. These three points are strongly emphasized in our herd.

We Own and Developed

TOITILLA of RIVERSIDE, champion of Canada, 24,094 lbs. milk, 1,067 lbs. butter.

CALAMITY JOHANNNA NIG, former champion, 25,443 lbs. milk, 1,007 lbs. butter.

BURKEYJE HENGERVELD, 1st 20,000-lb. 4-year-old in Canada, 20,177 lbs. milk, 782 lbs. butter.

HELENA HENGERVELD KEYES 3rd, 19,753 lbs. milk, 781 lbs. butter at 4 years old, and in the near future will give several 7-day records to report, around the 30 lbs. mark, with 100 lbs. milk.

We have a few choice young bulls, 1 ft for service, out of producing dams that we are offering at reasonable prices. They are sired by a son of MAY ECHO, ½ brother to the great MAY ECHO SYLVIA, world's champion, and a son of RAUWERD, Canada's only 29,000-lb. cow, dam of K. P. RAUWERD, 34,116 lbs. 7 days, 103 lbs. 1 day, Canadian record.

Write us your wants in the bull line, and I think we can satisfy you in both price and breeding.

THE O'REILLY STOCK FARM
R.R. No. 9 PETERBORO, ONT.

MARKET REVIEW AND FORECAST

TORONTO, Dec. 3.—The Ontario Department of Agriculture has issued a statement from the Census Bureau, giving the area and yields of the principal field crops of Ontario for 1917 as compared with 1916. The grain crop throughout the province are on the whole much better than those of last year. The oat crop is especially good with an average yield of 40.1 bushels per acre, as compared with 26.5 bushels in 1916. The potato crop is also double.

Wheat, with an average yield of 32.1 bushels per acre, as compared with 21.1. Hops generally gave higher yields than the two crops which are below last year's yields are hay, and corn for haying.

Hay, of both Canadian and American, are showing more activity throughout the Canadian hay market. Demand for Canadian hay from American buyers has resulted in a sharp rise in the price paid for hay during the past week. Supplies are going fast to points in the United States and quickly as care can be supplied. A rise in the price of wheat has resulted in the price of wheat being quoted six cents higher than they were a week ago, and Ontario oats have advanced four cents in sympathy with the Western market.

Milk is keeping fairly well up to the normal early-winter level. In some districts milk is being diverted to take advantage of the demand for city milk.

Live stock generally have good prospects for winter, as most kinds of food are in good supply throughout Eastern Canada. Feeding cattle are fairly numerous, yet being shipped to country points for the free freight policy of the government.

WHEAT.

The wheat trade is in rather an unusual state. In view of the fact that the government has taken over much of the available storage, it is hard to gauge the amount of wheat which can be taken for domestic consumption. The amount is not large, but it has been taken off the lakes for the season, and the car shortage has not been loosened. It is expected that the marketing of Ontario wheat will be slow, since weather conditions have made it impossible to continue the fall plowing. Feed wheat is selling at \$1.00 to \$1.05 per bushel, according to sample, and some wheat of extra quality is selling for 10 to 15 cents higher. Quotations in wheat: Ft. William, No. 1 Northern, 82¢; No. 2, 81.50¢; No. 3, 81.25¢; No. 4, 81.00¢; No. 5, 80.75¢; No. 6, 80.50¢; No. 7, 80.25¢; No. 8, 80.00¢; No. 9, 79.75¢; No. 10, 79.50¢; No. 11, 79.25¢; No. 12, 79.00¢; No. 13, 78.75¢; No. 14, 78.50¢; No. 15, 78.25¢; No. 16, 78.00¢; No. 17, 77.75¢; No. 18, 77.50¢; No. 19, 77.25¢; No. 20, 77.00¢; No. 21, 76.75¢; No. 22, 76.50¢; No. 23, 76.25¢; No. 24, 76.00¢; No. 25, 75.75¢; No. 26, 75.50¢; No. 27, 75.25¢; No. 28, 75.00¢; No. 29, 74.75¢; No. 30, 74.50¢; No. 31, 74.25¢; No. 32, 74.00¢; No. 33, 73.75¢; No. 34, 73.50¢; No. 35, 73.25¢; No. 36, 73.00¢; No. 37, 72.75¢; No. 38, 72.50¢; No. 39, 72.25¢; No. 40, 72.00¢; No. 41, 71.75¢; No. 42, 71.50¢; No. 43, 71.25¢; No. 44, 71.00¢; No. 45, 70.75¢; No. 46, 70.50¢; No. 47, 70.25¢; No. 48, 70.00¢; No. 49, 69.75¢; No. 50, 69.50¢; No. 51, 69.25¢; No. 52, 69.00¢; No. 53, 68.75¢; No. 54, 68.50¢; No. 55, 68.25¢; No. 56, 68.00¢; No. 57, 67.75¢; No. 58, 67.50¢; No. 59, 67.25¢; No. 60, 67.00¢; No. 61, 66.75¢; No. 62, 66.50¢; No. 63, 66.25¢; No. 64, 66.00¢; No. 65, 65.75¢; No. 66, 65.50¢; No. 67, 65.25¢; No. 68, 65.00¢; No. 69, 64.75¢; No. 70, 64.50¢; No. 71, 64.25¢; No. 72, 64.00¢; No. 73, 63.75¢; No. 74, 63.50¢; No. 75, 63.25¢; No. 76, 63.00¢; No. 77, 62.75¢; No. 78, 62.50¢; No. 79, 62.25¢; No. 80, 62.00¢; No. 81, 61.75¢; No. 82, 61.50¢; No. 83, 61.25¢; No. 84, 61.00¢; No. 85, 60.75¢; No. 86, 60.50¢; No. 87, 60.25¢; No. 88, 60.00¢; No. 89, 59.75¢; No. 90, 59.50¢; No. 91, 59.25¢; No. 92, 59.00¢; No. 93, 58.75¢; No. 94, 58.50¢; No. 95, 58.25¢; No. 96, 58.00¢; No. 97, 57.75¢; No. 98, 57.50¢; No. 99, 57.25¢; No. 100, 57.00¢; No. 101, 56.75¢; No. 102, 56.50¢; No. 103, 56.25¢; No. 104, 56.00¢; No. 105, 55.75¢; No. 106, 55.50¢; No. 107, 55.25¢; No. 108, 55.00¢; No. 109, 54.75¢; No. 110, 54.50¢; No. 111, 54.25¢; No. 112, 54.00¢; No. 113, 53.75¢; No. 114, 53.50¢; No. 115, 53.25¢; No. 116, 53.00¢; No. 117, 52.75¢; No. 118, 52.50¢; No. 119, 52.25¢; No. 120, 52.00¢; No. 121, 51.75¢; No. 122, 51.50¢; No. 123, 51.25¢; No. 124, 51.00¢; No. 125, 50.75¢; No. 126, 50.50¢; No. 127, 50.25¢; No. 128, 50.00¢; No. 129, 49.75¢; No. 130, 49.50¢; No. 131, 49.25¢; No. 132, 49.00¢; No. 133, 48.75¢; No. 134, 48.50¢; No. 135, 48.25¢; No. 136, 48.00¢; No. 137, 47.75¢; No. 138, 47.50¢; No. 139, 47.25¢; No. 140, 47.00¢; No. 141, 46.75¢; No. 142, 46.50¢; No. 143, 46.25¢; No. 144, 46.00¢; No. 145, 45.75¢; No. 146, 45.50¢; No. 147, 45.25¢; No. 148, 45.00¢; No. 149, 44.75¢; No. 150, 44.50¢; No. 151, 44.25¢; No. 152, 44.00¢; No. 153, 43.75¢; No. 154, 43.50¢; No. 155, 43.25¢; No. 156, 43.00¢; No. 157, 42.75¢; No. 158, 42.50¢; No. 159, 42.25¢; No. 160, 42.00¢; No. 161, 41.75¢; No. 162, 41.50¢; No. 163, 41.25¢; No. 164, 41.00¢; No. 165, 40.75¢; No. 166, 40.50¢; No. 167, 40.25¢; No. 168, 40.00¢; No. 169, 39.75¢; No. 170, 39.50¢; No. 171, 39.25¢; No. 172, 39.00¢; No. 173, 38.75¢; No. 174, 38.50¢; No. 175, 38.25¢; No. 176, 38.00¢; No. 177, 37.75¢; No. 178, 37.50¢; No. 179, 37.25¢; No. 180, 37.00¢; No. 181, 36.75¢; No. 182, 36.50¢; No. 183, 36.25¢; No. 184, 36.00¢; No. 185, 35.75¢; No. 186, 35.50¢; No. 187, 35.25¢; No. 188, 35.00¢; No. 189, 34.75¢; No. 190, 34.50¢; No. 191, 34.25¢; No. 192, 34.00¢; No. 193, 33.75¢; No. 194, 33.50¢; No. 195, 33.25¢; No. 196, 33.00¢; No. 197, 32.75¢; No. 198, 32.50¢; No. 199, 32.25¢; No. 200, 32.00¢; No. 201, 31.75¢; No. 202, 31.50¢; No. 203, 31.25¢; No. 204, 31.00¢; No. 205, 30.75¢; No. 206, 30.50¢; No. 207, 30.25¢; No. 208, 30.00¢; No. 209, 29.75¢; No. 210, 29.50¢; No. 211, 29.25¢; No. 212, 29.00¢; No. 213, 28.75¢; No. 214, 28.50¢; No. 215, 28.25¢; No. 216, 28.00¢; No. 217, 27.75¢; No. 218, 27.50¢; No. 219, 27.25¢; No. 220, 27.00¢; No. 221, 26.75¢; No. 222, 26.50¢; No. 223, 26.25¢; No. 224, 26.00¢; No. 225, 25.75¢; No. 226, 25.50¢; No. 227, 25.25¢; No. 228, 25.00¢; No. 229, 24.75¢; No. 230, 24.50¢; No. 231, 24.25¢; No. 232, 24.00¢; No. 233, 23.75¢; No. 234, 23.50¢; No. 235, 23.25¢; No. 236, 23.00¢; No. 237, 22.75¢; No. 238, 22.50¢; No. 239, 22.25¢; No. 240, 22.00¢; No. 241, 21.75¢; No. 242, 21.50¢; No. 243, 21.25¢; No. 244, 21.00¢; No. 245, 20.75¢; No. 246, 20.50¢; No. 247, 20.25¢; No. 248, 20.00¢; No. 249, 19.75¢; No. 250, 19.50¢; No. 251, 19.25¢; No. 252, 19.00¢; No. 253, 18.75¢; No. 254, 18.50¢; No. 255, 18.25¢; No. 256, 18.00¢; No. 257, 17.75¢; No. 258, 17.50¢; No. 259, 17.25¢; No. 260, 17.00¢; No. 261, 16.75¢; No. 262, 16.50¢; No. 263, 16.25¢; No. 264, 16.00¢; No. 265, 15.75¢; No. 266, 15.50¢; No. 267, 15.25¢; No. 268, 15.00¢; No. 269, 14.75¢; No. 270, 14.50¢; No. 271, 14.25¢; No. 272, 14.00¢; No. 273, 13.75¢; No. 274, 13.50¢; No. 275, 13.25¢; No. 276, 13.00¢; No. 277, 12.75¢; No. 278, 12.50¢; No. 279, 12.25¢; No. 280, 12.00¢; No. 281, 11.75¢; No. 282, 11.50¢; No. 283, 11.25¢; No. 284, 11.00¢; No. 285, 10.75¢; No. 286, 10.50¢; No. 287, 10.25¢; No. 288, 10.00¢; No. 289, 9.75¢; No. 290, 9.50¢; No. 291, 9.25¢; No. 292, 9.00¢; No. 293, 8.75¢; No. 294, 8.50¢; No. 295, 8.25¢; No. 296, 8.00¢; No. 297, 7.75¢; No. 298, 7.50¢; No. 299, 7.25¢; No. 300, 7.00¢; No. 301, 6.75¢; No. 302, 6.50¢; No. 303, 6.25¢; No. 304, 6.00¢; No. 305, 5.75¢; No. 306, 5.50¢; No. 307, 5.25¢; No. 308, 5.00¢; No. 309, 4.75¢; No. 310, 4.50¢; No. 311, 4.25¢; No. 312, 4.00¢; No. 313, 3.75¢; No. 314, 3.50¢; No. 315, 3.25¢; No. 316, 3.00¢; No. 317, 2.75¢; No. 318, 2.50¢; No. 319, 2.25¢; No. 320, 2.00¢; No. 321, 1.75¢; No. 322, 1.50¢; No. 323, 1.25¢; No. 324, 1.00¢; No. 325, 0.75¢; No. 326, 0.50¢; No. 327, 0.25¢; No. 328, 0.00¢; No. 329, 0.00¢; No. 330, 0.00¢; No. 331, 0.00¢; No. 332, 0.00¢; No. 333, 0.00¢; No. 334, 0.00¢; No. 335, 0.00¢; No. 336, 0.00¢; No. 337, 0.00¢; No. 338, 0.00¢; No. 339, 0.00¢; No. 340, 0.00¢; No. 341, 0.00¢; No. 342, 0.00¢; No. 343, 0.00¢; No. 344, 0.00¢; No. 345, 0.00¢; No. 346, 0.00¢; No. 347, 0.00¢; No. 348, 0.00¢; No. 349, 0.00¢; No. 350, 0.00¢; No. 351, 0.00¢; No. 352, 0.00¢; No. 353, 0.00¢; No. 354, 0.00¢; No. 355, 0.00¢; No. 356, 0.00¢; No. 357, 0.00¢; No. 358, 0.00¢; No. 359, 0.00¢; No. 360, 0.00¢; No. 361, 0.00¢; No. 362, 0.00¢; No. 363, 0.00¢; No. 364, 0.00¢; No. 365, 0.00¢; No. 366, 0.00¢; No. 367, 0.00¢; No. 368, 0.00¢; No. 369, 0.00¢; No. 370, 0.00¢; No. 371, 0.00¢; No. 372, 0.00¢; No. 373, 0.00¢; No. 374, 0.00¢; No. 375, 0.00¢; No. 376, 0.00¢; No. 377, 0.00¢; No. 378, 0.00¢; No. 379, 0.00¢; No. 380, 0.00¢; No. 381, 0.00¢; No. 382, 0.00¢; No. 383, 0.00¢; No. 384, 0.00¢; No. 385, 0.00¢; No. 386, 0.00¢; No. 387, 0.00¢; No. 388, 0.00¢; No. 389, 0.00¢; No. 390, 0.00¢; No. 391, 0.00¢; No. 392, 0.00¢; No. 393, 0.00¢; No. 394, 0.00¢; No. 395, 0.00¢; No. 396, 0.00¢; No. 397, 0.00¢; No. 398, 0.00¢; No. 399, 0.00¢; No. 400, 0.00¢; No. 401, 0.00¢; No. 402, 0.00¢; No. 403, 0.00¢; No. 404, 0.00¢; No. 405, 0.00¢; No. 406, 0.00¢; No. 407, 0.00¢; No. 408, 0.00¢; No. 409, 0.00¢; No. 410, 0.00¢; No. 411, 0.00¢; No. 412, 0.00¢; No. 413, 0.00¢; No. 414, 0.00¢; No. 415, 0.00¢; No. 416, 0.00¢; No. 417, 0.00¢; No. 418, 0.00¢; No. 419, 0.00¢; No. 420, 0.00¢; No. 421, 0.00¢; No. 422, 0.00¢; No. 423, 0.00¢; No. 424, 0.00¢; No. 425, 0.00¢; No. 426, 0.00¢; No. 427, 0.00¢; No. 428, 0.00¢; No. 429, 0.00¢; No. 430, 0.00¢; No. 431, 0.00¢; No. 432, 0.00¢; No. 433, 0.00¢; No. 434, 0.00¢; No. 435, 0.00¢; No. 436, 0.00¢; No. 437, 0.00¢; No. 438, 0.00¢; No. 439, 0.00¢; No. 440, 0.00¢; No. 441, 0.00¢; No. 442, 0.00¢; No. 443, 0.00¢; No. 444, 0.00¢; No. 445, 0.00¢; No. 446, 0.00¢; No. 447, 0.00¢; No. 448, 0.00¢; No. 449, 0.00¢; No. 450, 0.00¢; No. 451, 0.00¢; No. 452, 0.00¢; No. 453, 0.00¢; No. 454, 0.00¢; No. 455, 0.00¢; No. 456, 0.00¢; No. 457, 0.00¢; No. 458, 0.00¢; No. 459, 0.00¢; No. 460, 0.00¢; No. 461, 0.00¢; No. 462, 0.00¢; No. 463, 0.00¢; No. 464, 0.00¢; No. 465, 0.00¢; No. 466, 0.00¢; No. 467, 0.00¢; No. 468, 0.00¢; No. 469, 0.00¢; No. 470, 0.00¢; No. 471, 0.00¢; No. 472, 0.00¢; No. 473, 0.00¢; No. 474, 0.00¢; No. 475, 0.00¢; No. 476, 0.00¢; No. 477, 0.00¢; No. 478, 0.00¢; No. 479, 0.00¢; No. 480, 0.00¢; No. 481, 0.00¢; No. 482, 0.00¢; No. 483, 0.00¢; No. 484, 0.00¢; No. 485, 0.00¢; No. 486, 0.00¢; No. 487, 0.00¢; No. 488, 0.00¢; No. 489, 0.00¢; No. 490, 0.00¢; No. 491, 0.00¢; No. 492, 0.00¢; No. 493, 0.00¢; No. 494, 0.00¢; No. 495, 0.00¢; No. 496, 0.00¢; No. 497, 0.00¢; No. 498, 0.00¢; No. 499, 0.00¢; No. 500, 0.00¢; No. 501, 0.00¢; No. 502, 0.00¢; No. 503, 0.00¢; No. 504, 0.00¢; No. 505, 0.00¢; No. 506, 0.00¢; No. 507, 0.00¢; No. 508, 0.00¢; No. 509, 0.00¢; No. 510, 0.00¢; No. 511, 0.00¢; No. 512, 0.00¢; No. 513, 0.00¢; No. 514, 0.00¢; No. 515, 0.00¢; No. 516, 0.00¢; No. 517, 0.00¢; No. 518, 0.00¢; No. 519, 0.00¢; No. 520, 0.00¢; No. 521, 0.00¢; No. 522, 0.00¢; No. 523, 0.00¢; No. 524, 0.00¢; No. 525, 0.00¢; No. 526, 0.00¢; No. 527, 0.00¢; No. 528, 0.00¢; No. 529, 0.00¢; No. 530, 0.00¢; No. 531, 0.00¢; No. 532, 0.00¢; No. 533, 0.00¢; No. 534, 0.00¢; No. 535, 0.00¢; No. 536, 0.00¢; No. 537, 0.00¢; No. 538, 0.00¢; No. 539, 0.00¢; No. 540, 0.00¢; No. 541, 0.00¢; No. 542, 0.00¢; No. 543, 0.00¢; No. 544, 0.00¢; No. 545, 0.00¢; No. 546, 0.00¢; No. 547, 0.00¢; No. 548, 0.00¢; No. 549, 0.00¢; No. 550, 0.00¢; No. 551, 0.00¢; No. 552, 0.00¢; No. 553, 0.00¢; No. 554, 0.00¢; No. 555, 0.00¢; No. 556, 0.00¢; No. 557, 0.00¢; No. 558, 0.00¢; No. 559, 0.00¢; No. 560, 0.00¢; No. 561, 0.00¢; No. 562, 0.00¢; No. 563, 0.00¢; No. 564, 0.00¢; No. 565, 0.00¢; No. 566, 0.00¢; No. 567, 0.00¢; No. 568, 0.00¢; No. 569, 0.00¢; No. 570, 0.00¢; No. 571, 0.00¢; No. 572, 0.00¢; No. 573, 0.00¢; No. 574, 0.00¢; No. 575, 0.00¢; No. 576, 0.00¢; No. 577, 0.00¢; No. 578, 0.00¢; No. 579, 0.00¢; No. 580, 0.00¢; No. 581, 0.00¢; No. 582, 0.00¢; No. 583, 0.00¢; No. 584, 0.00¢; No. 585, 0.00¢; No. 586, 0.00¢; No. 587, 0.00¢; No. 588, 0.00¢; No. 589, 0.00¢; No. 590, 0.00¢; No. 591, 0.00¢; No. 592, 0.00¢; No. 593, 0.00¢; No. 594, 0.00¢; No. 595, 0.00¢; No. 596, 0.00¢; No. 597, 0.00¢; No. 598, 0.00¢; No. 599, 0.00¢; No. 600, 0.00¢; No. 601, 0.00¢; No. 602, 0.00¢; No. 603, 0.00¢; No. 604, 0.00¢; No. 605, 0.00¢; No. 606, 0.00¢; No. 607, 0.00¢; No. 608, 0.00¢; No. 609, 0.00¢; No. 610, 0.00¢; No. 611, 0.00¢; No. 612, 0.00¢; No. 613, 0.00¢; No. 614, 0.00¢; No. 615, 0.00¢; No. 616, 0.00¢; No. 617, 0.00¢; No. 618, 0.00¢; No. 619, 0.00¢; No. 620, 0.00¢; No. 621, 0.00¢; No. 622, 0.00¢; No. 623, 0.00¢; No. 624, 0.00¢; No. 625, 0.00¢; No. 626, 0.00¢; No. 627, 0.00¢; No. 628, 0.00¢; No. 629, 0.00¢; No. 630, 0.00¢; No. 631, 0.00¢; No. 632, 0.00¢; No. 633, 0.00¢; No. 634, 0.00¢; No. 635, 0.00¢; No. 636, 0.00¢; No. 637, 0.00¢; No. 638, 0.00¢; No. 639, 0.00¢; No. 640, 0.00¢; No. 641, 0.00¢; No. 642, 0.00¢; No. 643, 0.00¢; No. 644, 0.00¢; No. 645, 0.00¢; No. 646, 0.00¢; No. 647, 0.00¢; No. 648, 0.00¢; No. 649, 0.00¢; No. 650, 0.00¢; No. 651, 0.00¢; No. 652, 0.00¢; No. 653, 0.00¢; No. 654, 0.00¢; No. 655, 0.00¢; No. 656, 0.00¢; No. 657, 0.00¢; No. 658, 0.00¢; No. 659, 0.00¢; No. 660, 0.00¢; No. 661, 0.00¢; No. 662, 0.00¢; No. 663, 0.00¢; No. 664, 0.00¢; No. 665, 0.00¢; No. 666, 0.00¢; No. 667, 0.00¢; No. 668, 0.00¢; No. 669, 0.00¢; No. 670, 0.00¢; No. 671, 0.00¢; No. 672, 0.00¢; No. 673, 0.00¢; No. 674, 0.00¢; No. 675, 0.00¢; No. 676, 0.00¢; No. 677, 0.00¢; No. 678, 0.00¢; No. 679, 0.00¢; No. 680, 0.00¢; No. 681, 0.00¢; No. 682, 0.00¢; No. 683, 0.00¢; No. 684, 0.00¢; No. 685, 0.00¢; No. 686, 0.00¢; No. 687, 0.00¢; No. 688, 0.00¢; No. 689, 0.00¢; No. 690, 0.00¢; No. 691, 0.00¢;

Holsteins at Lakeview 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.



To the skill and 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.

Standing on His Merit

EVERY breeder that keeps good Holsteins must judge every single animal in his herd on its individual merit—and on merit alone. The actual utility value can be measured in one or all of three ways. It may be in the splendid blood lines and ancestral backing on either side; it may be in the unique type of young stock a sire throws; it may be in the big milk and butter records of his female progeny. The greatest sires of the breed—and the ones most prized as herd leaders, are those that combine all of these possibilities to an outstanding degree.

Records

As practically every animal in the Lakeview herd has been developed by us, we are justly proud of our Records. They include 5 Canadian present day championships—

Lakeview Rattler—1916 champion mature cow—37.54 lbs. butter from 724.9 lbs. milk, with an average test of 4.14 per cent. fat. She is also the 1917 30-day champion 8 months after calving.

Lakeview Dutchland Artis—1916 and 1917 Canadian champion senior 3-year-old gave 34.66 lbs. butter from 667.7 lbs. milk on an average butter fat test of 4.88 p.c.

Pet Canary Countess 2nd—Champion 3-year-old of Michigan and also the Canadian champion for 3 years in 8 months after calving with 32.48 lbs. butter and a regular record of 27.73 lbs. butter in 7 days; 110.23 lbs. in 30 days.

Queen Inka DeKol has 27.53 lbs. butter from 632 lbs. milk. She is the new Can. Champion mature cow, 8 months after calving with 23.35 lbs. butter, thus assuming her place as champion of Canada. Queen is only equalled by 2 other cows in the world.

Lakeview Queen 3rd—Grand-daughter of above has again established a high water mark for Canada by producing as a 2-year-old in 7 days, 15.01 lbs. butter from 234.7 lbs. milk averaging 4.21 per cent. Record made nearly 9 months after calving.

These records go to show by their producing ability generation after generation and in their persistence, that the entire herd stands on real productive merit.



A group of choice young females by Dutchland Colantha Sir Mona. Sires from him are reproducing his kind throughout the Dominion.

Dutchland Colantha Sir Mona

is a sire of this kind—a bull with a peerless record among Canadian Holsteins.

HIS BACKING—His Sire is Colantha Johanna Lad, the world's greatest proven sire of today with 170 A.R.O. daughters and 70 producing sons. Eleven of the former above 30 lbs. of butter and 23 above 600 lbs. milk in 7 days—three of them holding world records.

His dam—Mona Pauline DeKol is considered the strongest reproducing cow in the world—and the dam of Dutchland Colantha Mona, the world's record 3 year old.

Dutchland Colantha Sir Mona has proved himself a prince among producers. He is the sire of Lakeview Dutchland Artis, the Canadian Champion Senior

3 year old who produced in 7 consecutive days, 34.66 lbs. butter from 566.7 lbs. milk with an average butter fat test of 4.88%. He is also the sire of Lakeview Dutchland Hesperveld 2nd, the Senior and Grand Champion at both Toronto and London for 1916 and 1917.

Every living daughter of Dutchland Colantha Sir Monover 2 years old is in the Record of Merit. Dutchland is a wonderful type of virility, progeny and richness of breeding. He has proved it by his good works.

This is the type of bull that heads the herd at Lakeview, we are proud of him, we have reason to be so. It is this blood, the backing of records, and the true Holstein productivity that we have been and are still able to offer breeders of good Holsteins in America through the young herd leaders that go out from Lakeview. Plan now to secure one of his coming crop of sons.

Dutchland Colantha Sir Mona Stands on His Merit



A pair of "Black and Whites"—the kind that are developed at Lakeview—Lakeview L'Estrange and Lakeview Rattler, the new 30 day Canadian Champion in the 8 months after calving division.

Sales

To give the breeders of Holsteins in Canada, an inkling of the desirability of the young sires with the Lakeview combination of blood and records, we give herewith just a few of the prominent institutions whose experts have come to Lakeview to secure herd leaders.

- 1.—Ontario Agricultural College, Guelph, Ont.
- 2.—Hamilton Asylum Farm, Hamilton.
- 3.—Bloomfontein Land Settlement Co. South Africa.
- 4.—Canadian Military Hospital Commlation, Guelph, Ont., who have just recently secured "a chip off the old block"—Dutchland Colantha Sir Mona.
- 5.—Department of Agriculture, Regina, Sask.
- 6.—Provincial Prison Farm, Guelph.
- 7.—Mimico Asylum Farm, Mimico, Ont.
- 8.—Prof. H. H. Dean, of the Dairy Division, Guelph—A sire for his private farm at Grimby.

These are only a few of the big institutions in addition to scores of the foremost breeders in Canada and the United States.

Lakeview Stock Farm, Bronte, Ont.

Major E. F. Osler
Proprietor

The lover of Black and Whites will find a kindly welcome and a pleasure in a visit to the magnificent herd of richly bred Holsteins at Lakeview

T. A. Dawson
Manager

bull, having for his dam Onyx Clothide, a cow, with a record of over 32 lbs. of butter made in 7 days.

Of course, the youngster that is to be sold at Welland, Dec. 11, will be a half-brother to the two youngsters mentioned above, one of which sold for \$300 and the other for \$53.20. We believe that our Canadian Holstein breeders will be much interested in this sale, and will be at Welland on Dec. 11 in goodly numbers, prepared to bid a figure which will secure this great young sire to the Holstein industry of Canada.

B. LEMON & SONS' HERD.

THE outstanding cow of the herd is Plus Pontiac, who has the following 4 yr. old record, 31.55 lbs. butter and 553.7 lbs. milk in 7 days. Average butter and 218.3 milk in 30 days, average 1.43 per cent. fat; 20.21 lbs. milk, and 1,044.45 lbs. butter in 100 days, average 4 per cent. fat. A.I.C.O. She has a 1-year-old record of 21.05 lbs. milk and 390 lbs. butter in one year. She holds the three-year-old butter record for Canada, any breed. She holds the four-year-old butter record for Canada for Holsteins, and she is the champion cow of Canada, any breed, any age, for two consecutive yearly records. She is fifth in general standing as a four-year-old in the American Advanced Registry. She is the only Holstein cow in Canada to produce over 20,000 lbs. milk in one year, and averages 4 per cent. fat for the year.

The bull S. Lemon & Sons are offering is a son of the above cow, and sired by Prince Patrick, a son of Evgene, bred March, 29.45 lbs. butter and 71.2 lbs. milk in 7 days; 22.33 lbs. butter and 2.58 lbs. milk in 30 days; 110.8 lbs. milk in one day; 25.07 lbs. milk and 1,130 lbs. butter in one year. His full sister, Plus Mercedes, 20.150 lbs. milk in one year, made 15.35 lbs. butter and 383.3 lbs. milk in 7 days.

Inka Artis De Kol made at 4 years 26.12 lbs. butter and 27.2 lbs. milk in 7 days. It will be the same dam as Plus Pontiac Artis, and by the sire of the Echo Sylvia, the world's record milk cow.

Their present herd sire is by a son of Evergreen March, who has given 24.07 lbs. milk and 1,120 lbs. butter in one year. They also have the cow, Fernelle Calamity, who won grand championship at Toronto Fair in 1917. She has three records that average 13.53 lbs. milk per year. Two other animals worthy of mention are daughters of Constantine Carle, Mercedes, 20.150 lbs. milk in one year. This pair won fifth place at Toronto Fair in 1917 in class for get of dam.

SOME B. C. HOLSTEIN HISTORY.

EDITHOR, Farm and Dairy—In the Great Prazer Valley there are quite a number of valleys and as you travel through them you will see black and white cattle thickly dotted in the fields for miles and miles wherever they are. There is in the east and west deltas, a little Holland valley some very beautiful cattle. A great many years ago H. F. Page brought to the Mission quite a lot of the finest bred and highest priced Holsteins in the world at that time. Mr. Page's best cow about all the cows of Clothide 2nd, one of the finest cows that ever left Holland and the best cow in the world to give 13 tons of milk in one year. J. M. Stevens, Stevenson, imported a cow from Ontario; then the good work began with using the best sires.

I remember the great bull bred by Mr. Clemens, St. George, and cows from the Clemons-bred milk cow about all the prizes at New Westminster Fair years ago, first for largest quantity of milk and butter; and when coming through the dairy barns would say: "Well, I never saw such cows!" After that came Sir Canary Methilde. He is well known, but every one does not know that cows from Sir Canary give five to ten pounds of butter a week more than their dams.

Farmers have so much work now a great many of the boys have gone. My eyes fill when I think of the bright, kind-hearted boys; they have gone away and daily their young life's blood sinks into the fields in France.—Wm. Medd, Milner, B. C.

HAMILTON ASYLUM HOLSTEINS.

THE Holstein herd at this institution, under the careful management of Dr. English, Superintendent, and Mr. Rob. Salter, Herdsman, are doing good work.

Their senior herd sire, Sir Aagie Dutchland of Hickey's, is a grandson of Dutchland Sir Mona and Lakeview Leastrange, while his dam has given in R. F. of P. at years 27.72 lbs. milk, testing 4.08 per cent. The junior herd sire is King Korndyke Mercena, whose sire is King Hector Alberts Spord, and whose dam, Mersa Mercena, has a 14 lb. two year record.

Some of the most noticeable of the cows are Aagie Bure De Kol, who gave in R. F. of P. 13.70 lbs. at 3 years' old, testing 4.08 per cent. Another excellent individual is Cornish DeKooze, who has an R. F. of P. 3 year old record of 13,470 lbs. testing 3.45 per cent, and a Junior two year old record of 21.6 lbs. testing 2.16 per cent. Three Buster Baronses is another very fine cow. She has a 4 year old and has a two-year-old R. F. of

P. test of 12,906 lbs. milk, averaging 3.89 per cent. fat. Another cow that is counted on for some big work is Cottage Leastrange of Hickey's, a cow with wonderful veining and excellent type.

It is possible that Mr. Salter takes even greater pride in the numerous excellent records of some of his cows, the following figures are of interest.

No. 110 produced in 7 months 7,256 lbs. milk, averaging 4.74 lbs. per day. She has given 39 lbs. in one milking and averaged 10 lbs. per day for 32 days. No. 216, as a three-year-old, averaged 4 lbs. per day for 181 days. At present she is giving 12 lbs. in 66 days. Another grade yearling in May, 1917, records four months and four days, average 10 lbs. Another was giving nearly 50 lbs. per day when calving.

These records are made on twice a day milking. All cows are tuberculin tested.

Postal Card Reports
Correspondence Invited.

KINGS COUNTY, P.E.I.
MONTAGUE, Nov. 15.—This week has brought the first cold snap, frost and snow. A great many people were caught when their turnips out. Great losses in price. Lamb to be a good slump in price from 11c down to 9c a lb. Live weight. Some pork is going on the market at 15c to 20c a lb. Eggs are getting very scarce, price 35c a doz. Feed will be very scarce this winter. Hay sold at a sale in this place for \$22 a ton; oat straw, \$15 a ton. G. A.

WELLINGTON COUNTY, ONT.
GUELPH, Nov. 3.—Fall plowing is rather backward owing to a late start. 75 per cent. of the threshing is finished. Oats, barley and peas have turned out well and are a fine sample. Fall wheat and rye have given fair yields. Mangels and turnips are fairly good, the latter having been quite badly affected by a striped caterpillar. Potatoes are a good crop, but their cooking quality is generally none too good, as much of the crop did not mature properly owing to blight and early frost.—C. S. N.

GREY COUNTY, ONT.
THORNHURST, Nov. 27.—We have a few inches of snow. The fall wheat did not look as promising as I ought to be owing to the wet weather. Prices are good for everything, and our cattle are turning out well. Our Institute workers are still busy. At the last meeting we had knit 4,418 pairs of socks for our soldier boys. The Red Cross concert, which was held a few evenings ago, made the use of over \$200. Everybody is doing their best to help along with the work.—C. P.

NEW WESTMINSTER DISTRICT, B. C.
CHILLIWACK, Nov. 1.—October was a lovely month. The frost held off until the 16th and was very light then. (Sheep were fitted in fairly good time. Potatoes are a good crop here this year, but are a little blighted. However, \$15 a ton is being paid for them. Turnips are \$14 a ton, delivered at the car. Oats for feed selling at \$50 a ton.)

"TYPE, PRODUCTION AND BREEDING"

WE PRACISE AND PRACTICE
Our Herd Sire PONTIAC SEGIS KEYES "21979" is the ideal and acre of that motto

As an individual he has never been beaten in the keenest competition of the show ring. For production he has 16 tested dams who have averaged over 28 lbs. of butter in seven days. For breeding he has the world's best milk in 7 days, and he promises great production. Sons of him from our best cows can be ordered now for spring delivery. A dandy bull calf for sale now, which weighed 128 lbs. at one day old and from a 1460-lb. sister of MAY ECHOY SYLVIA. Females all agree for sale. Write your needs and ask for photo and pedigree of Pontiac Segis Keyes.

Both he and our prices will please you.
A. ARTHUR GIBSON : : **NEWCASTLE, ONT.**

Holsteins at Woodstock

Below are to be found a list of our consignors and their offering. We want lovers of Holsteins to know the men and the quality of herds in our annual sales. Get catalogues from the Secretary, or write personally to any of our breeders about their offerings.

W. E. THOMPSON, SECRETARY : : **WOODSTOCK, ONTARIO**

ORCHARD LEIGH HOLSTEINS AT WOODSTOCK

No. 1—MAY POSCH CALAMITY—4 years old—fresh—good record in R. O. M. and R. O. P.
No. 2—One one-year-old bull-dam at 3 years R. O. M. milk 559.5 lbs.; butter, 25.81 lbs.; milk one year, 19,176 lbs.; butter, 845 lbs. sire's dam—R. O. M. milk 571 lbs.; butter, 26.15 lbs. R. O. P. milk one year, 19,369 lbs.; butter, 875 lbs.
No. 3—A beautiful 7-months-old heifer, sired by SIR MIDNIGHT LYONS SEGIS KEYES (21979) WALKER.

JAMES G. CURRIE & SON : : **INGERSOLL, ONT.**

PONTIAC KING WALKER "25666"

Sire in service at
CENTRE VIEW FARM
His dam is PONTIAC JESSIE, 37.62 lbs. in 7 days and 153 lbs. in 30 days, and his sire, RIVELDADA WALKER SEGIS, a son of Brookside Segis Keyes (21979).
The herd now numbers 45 heads and every one, including Pontiac Jessie, is of my own breeding. Members of this herd won more money at Guelph and Ottawa Dairy Tests last winter than any other herd. My consignment to the Woodstock sale, December 12, includes—2 fine heifers, heavy in calf to the herd sire, and 2 extra fine bulls ready for service. When in need of a good bull,

Write Me for PARTICULARS.
WOODSTOCK, ONT., MARTIN McDOWELL,
Shipping Station, Oxford Centre, Ont.

WE WILL SELL BY PUBLIC AUCTION IN

WOODSTOCK, ONT. ON DECEMBER 12, 1917
OUR SENIOR HERD SIRE

Findere Valdessa Ormsby Fayne

His Sire KING HENGERVELD AAGGEE PAYNE, the only bull in the world to have five daughters with records over 36 lbs. butter in 7 days. All made under full age. He is also a brother to the only 50-lb. cow of the breed.

His Dam VALDESSA ORMSBY, a 24.28 lb. 3-year-old daughter of VALDESSA SCOT 2nd, 41.88, and full sister to VALDESSA ORMSBY DEKOL, 38.14 lbs. Valdessa Scot 2nd, was the first cow of the breed to make 40 lbs. in a week, is also the only 40-lb. cow to have 5 A. R. O. daughters. With her five daughters they average 23.71, which is a world's record,—equalled by no other family of Mother and five daughters. Then, again, Valdessa Ormsby is due to freshen again in the spring when her owners hope to greatly increase her record.

This bull will positively be sold to the highest bidder. Our herd is mostly daughters and grand-daughters of him, otherwise he would not be for sale. For catalogue or further information apply

WILBER C. PROUSE : : **R. R. No. 3 TILLSONBURG, ONT.**



MERCENA CALAMITY POSCH, NO. 9165.
Official record 707.1 lbs. milk, 27.41 lbs. butter,
R.O.P. 26,448 lbs. milk, 1,041.25 lbs. butter.

We Have Some Sturdy Young Bull Calves For Sale

Consider these:

- A bull calf, born August 2nd, whose two nearest dams average over 27,000 lbs. milk and 1,077 lbs. butter in one year.
- A grandson of the 26,448 lb. cow, born March 10th.
- A bull calf out of a 4-year-old, with a seven day official record of 18.6 lbs. butter.
- Also a bull born April 30th, out of this same 4-year-old.

WRITE US AT ONCE

W. FRED FALLIS R.R. No. 3 Millbrook, Ont.

BROWN SWISS CATTLE. By W. N. Hubbard.

INASMUCH as the dairy breeders in general are not very well acquainted with the Swiss breed, the following I trust may be of interest to all lovers of pure-bred cattle. The Brown Swiss is considered the dairy cow par excellence of Switzerland. Their native home is in the famed canton of Schwyz, which is the most noted among the Swiss cantons for its dairy industry. Up to 1909 a total of about 150 Brown Swiss cattle were imported in this country. At the present time 15,000 have been recorded. For a long time New England and the states of the middle west have been regarded as the home of this breed, but later records show that the Brown Swiss has been introduced into nearly every state in the Union and throughout the length and breadth of America, and a good number have found their way across the border into Canada, they have proved very popular, and the breed stands well in general estimation where it is known.

The Brown Swiss is one of the most beautiful and distinctive of the dairy breeds. All that are true to type are solid in color. The animals of a herd generally are even in appearance showing careful breeding throughout many generations and when examined are found to be small boned for their size, with a fine silky coat, rich elastic skin and other attractive dairy points.

The Type is Fixed. Centuries of breeding for a certain fixed type in Switzerland has produced an animal firmly typified in shape, size, color and disposition and the power to transmit these qualities is so strong that even grade animals with as little as one-fourth blood show decidedly the shape and size of their ancestors, also unusual stamina and longevity.

Productiveness in age makes the Brown Swiss supreme. The intending purchaser of dairy cattle, who desires to enter the dairy business scientifically expecting to realize the largest satisfaction and profit from his investment and from his mental and physical labors, should have a broad vision and be capable of doing research work in the matter of selection of breed. It is not enough for him to know that a certain breed of cow farm to the best advantage the roughage of the farm, but it vitally important that he know by actual statistics whether the breed is a profit producer in old age. It is generally conceded that a cow at thirteen years retires from the

dairy. If she is therefore valuable for that length of time, how much greater is her value if she is a healthy and satisfactory producer for a period of six or eight years more?

Instances of Longevity. Lady Agatha, aged gave birth to a strong healthy calf when 22 years and nine months old. Alice S., a Dutch to a calf at the age of 18 years. Florine 2nd, 1918, calved December, 1908, gave birth to a calf May, 1911. Nell W., 1924, gave birth to calf at the age of 19 years. Clementine, 1939, gave birth to calf at the age of 18 years. As herein shown, and from a host of records elsewhere, it is plainly evident that the Brown Swiss leads her competitors by about 50 per cent. in the matter of length of productiveness.

The American Association in the Register of production has 199 cows which have yielded with an average of 10,868.7 lbs. milk, 433.45 lbs. butter fat, placing them second in milk and third in butter fat production among the dairy breeds. An average herd of cows in milking condition will weigh from 1,300 to 1,400 pounds each. Bulls in good condition should weigh from 1,700 to 2,400 pounds. The Swiss calf at a month old will weigh from 180 to 200 pounds.

In the Brown Swiss we have a breed of cattle solid, heavy built, hardy and active to suit its valley and mountain home, gentle, docile, kind from its thorough domestication and close personal contact with its owners and attendants. A large milker yielding rich milk suitable to the manufacture of choice butter and cheese, with light bone covered with the best of meat and in such quantities as to make it a desirable animal for the butcher as well as having a capacity for producing the best of working cattle. Finally one which will yield a generous return for whatever care, time labor or money expended.

LAKEVIEW NOTES.

T. A. DAWSON, manager of Lakeview Stock Farm, writes Farm and Dairy that they have sold their bull, Lakeview Daisy Sir Mona, recently advertised in Farm and Dairy, to the Military Hospitals Commission of Canada, to go to their farm at Guelph. This young bull is sired by Dutchland Colman Sir Mona, and the dam, granddam and great granddam average over 23 lbs. of butter in seven days. The Hospitals Commission have a bull with both individuality and breeding, and are to be congratulated on their selection.

HERE IS YOUR OPPORTUNITY TO SECURE



Plus Pontiac Artis.

A
GREATER
YEARLING
BULL

Prince Plus Pontiac Artis.

BACKED BY EXCELLENT RECORDS
WE ARE OFFERING FOR SALE PRINCE PLUS PONTIAC ARTIS

His dam is PLUS PONTIAC ARTIS, and his sire's dam is EVERGREEN MARCH. The averages for his dam and sire's dam are 101 lbs. milk in 1 day, 36.50 lbs. butter for 7 days, 123.75 lbs. butter for 30 days, 23,562 lbs. milk and 1,082 lbs. butter for one year.

S. LEMON & SONS

He is the only bull in Canada with his five nearest dams averaging 20,800 lbs. milk and 945 lbs. butter per year. See gossip notes for records.

OUR PRICES ARE RIGHT

We also offer a son of INKA ARTIS DEKOL, 11 months old. Write to us, or better still, come and see them.

LYNDEN, ONTARIO

Superba King Rag Apple

OUR 381b. JUNIOR HERD SIRE

Son of the Greatest Bull in the world—Rag Apple Korndyke 8th; half-brother to the \$53,200 bull and the \$20,000 bull, also half-brother to the former World's Record junior 2-year-old.

Dam—Orchard Grove Auburn Segis, 38.71 lbs. butter 7 days, as senior 4-year-old, and granddaughter of the Great King Segis. She also has a 38.65 half-sister. The average first two nearest dams—38.37. Average his dam, sire's dam and granddam—36.12. Average his six nearest dams—three under full age—31.02.

Some of Our Records as Results of Our First Testing:

Johanna Rue Luraine 2nd—715.6 milk (world's record $\frac{3}{4}$ -udder); 30.20 butter, 7 days; best day's milk, 104.7.

Jemima Johanna Posch, 5-years, 29.30 butter, 7 days; best day's milk, 100.4.

Totilla Pontiac Tet—Senior 2-year-old. 21.41 butter, 7 days.

And other very creditable records for beginners.

Meet
Us
at the
Welland
Club Sale
Dec. 11th,
1917



Superba King Rag Apple—A snap in the field.

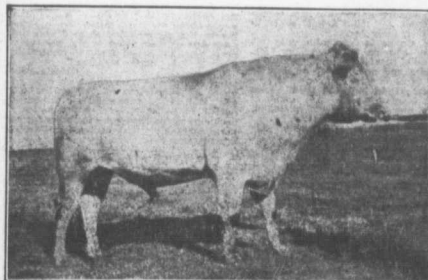
LLENROC FARMS

ON THE BOULEVARD OF THE BEAUTIFUL NIAGARA RIVER

Rag Apple Pontiac Korndyke DeKol

Sire—Grandson of Pontiac Korndyke and Pontiac Pet, 37.68 (World's Record when made), and by a 27-lb. 3-year-old.

Dam—A 28.54 daughter of a full brother to Pontiac Clothilde DeKol 2nd, 37.21 (World's Record when made), and by May Hartog Pauline DeKol—a twice World's Record Cow at 3 1-2 and 4 1-2 years old.



He has proved himself a getter of choice stock

Our
Senior
Herd Sire

The photos shown are just snaps taken by one of the boys and do not at all do the bulls justice.

We Have For Sale

A number of good young bulls from our senior sire and tested dams.

They show wonderful type and are fit to head any herd.

We also have a young bull by the great sire, Sir Veeman Hengerteld, out of a 15.55 junior 2-year-old granddaughter of Diona Konigen Pieterje, 37.44 butter in 7 days.

Correspondence and inspection invited.

W. C. HOUCK, Prop., BLACK CREEK, ONT., Post Office Address
R.R. No. 1, Chippawa, Ont.

Korngold Holsteins**Herd Sire Paul Hengerveld Burke 22624**

Seven Nearest Dams
Average 20,000 lbs. in 1 year

Sister gave over 800 lbs. milk in 7 days.

PRESENT OFFERING:—

A few choice bulls 7-11 months old, sired by herd sire and from R. O. M. and R. O. P. dams.

WRITE FOR EXTENDED PEDIGREES

KORNGOLD STOCK FARM

F. J. MCCALPINE

BLOOMFIELD, ONT.

— 100 lbs. Milk —

in one day
in each day

WE OFFER BULL CALVEYS, sired by a son of a hundred pound cow, and whose dams are sired by a son of a hundred pound cow—also cows and heifers bred to a hundred pound sire.

JAS. A. CASKEY

R. R. 2.

MADOC, ONT.

— TWO HOLSTEIN BULLS —

eight and ten months old, sired by a son and grandson of INKA SYLVIA, BETTS POSCH and MAY, ECHO. Price \$60 and \$75. Delivered free within 100 miles of Peterboro, and priced at about half their value. They are good individuals.

H. I. SEYMOUR

R. R. NO. 5

PETERBORO, ONT.

— HOLSTEIN BULLS FOR SALE —

Four bulls, 8 to 10 months old, sired by KING SIGNS ALZARBELLA, SIFFORD (imported by Purcell & Leaven), and from daughters of SIR MAY DAIKINSB (Son of MAY ECHO) and COUNT SIRIUS WALKER, PLETTERTJE. Write for extended pedigree and prices. Prices very reasonable.

CLARENCE MALLORY

BLOOMFIELD, ONTARIO

Morningside Offerings

YOUNG BULLS FOR SALE, sired by a son of a full brother of MAY ECHO SYLVIA, 41 lbs. butter in 7 days with sons sired by a son of the famous LAURELWOOD COUNT DEKOR, LADY PAULINE, 29,000 lbs. milk in R. O. P.

Priced to sell.

Write P. B. NELSON

Campbellford, Ont.

KING SEGIS WALKER'S

Oldest daughter with first calf made 456 lbs. milk and 24 lbs. butter; with her second calf, 560 lbs. milk and 29½ lbs. butter. Her first granddaughter, through his son, at 2 years 2 months, made 440 lbs. milk and 23½ lbs. butter. Young stock for sale.

A. A. FAREWELL, OSHAWA, ONTARIO.

— 10— Fresh Holstein Cows — 10 —

Six already fresh, four year old will fresh soon, to a son of former World's Champion Senior 4-year-old; 4 are grand-daughters of Sir Admiral Ormsby; 1 is daughter of Pontiac Hermes. All are young and well bred. \$1,500 takes the 10—with all papers.

This is a bargain—Write to-day.

ELMCROFT STOCK FARM

MAXVILLE, ONTARIO

HIGHLAND LAKE FARMS

Herd sire, AVONDALE PONTIAC ECHO (under lease), a son of MAY ECHO SYLVIA, the world's record cow. Only one other 41-lb. bull in Canada. We have young bulls for sale, whose two nearest dams (both Canadian champions) average as high as 26.65 lbs. butter in seven days; another whose two nearest dams are both 100-lb. cows, and one ready for service on a 41-lb. sire and an 18,000-lb. two-year-old dam.

Send for our "Book of Bulls." A few females for sale. Satisfaction guaranteed.

R. W. E. Burnaby

Farm at Stop 5,
Young Street Road.

Jefferson, Ont

SALE CATALOGUES.

\$3.00 per pair for 500 copies.
Single typewritten PEDIGREES,
3 copies, \$1.00; 10 or more, 75c.
each.

Get your order in early.

THE CANADIAN HOLSTEIN
SALES COWS

Write for Catalogue.
Simcoe, Ontario. Bell Phone 130.

CLEARING SALE

30 head pure-bred Holsteins—Cows, heifers and bulls. ALSO farm of 115 acres. 7th Con., South Dorchester.

Write for Catalogue.
FRED SINDEN, Prop., BELMONT, ONT.

AYRSHIRE NEWS**BEAVER MEADOW STOCK FARM.**

W. C. TULLY of Athelstan, Que., whose full page advt. appears in this issue, is to be highly commended upon the step he has taken in placing the merits of his cattle before the Farm and Dairy readers. Mr. Tully, has for several years been working up a strain of Ayrshires that is hard to beat. His advt. is self explanatory. It shows the result of careful line breeding. It quotes the variety of type of the various animals and the general high standard of the records, more particularly regarding butter fat. The animals shown in the cuts are but fair samples of many which I saw at Beaver Meadow Stock Farm, while spending a day with Mr. Tully.

Beaver Meadow Ayrshires are of the great, deep-bodied kind. Not the spacious udders and prominent milk veins. The photo of Beaver Meadow Carrie did does not at all do her justice, but was the obtainable. The same may be said of the herd bull who appears in the centre page. He is a fine young animal of the deep-bodied kind, and is for sale. Either he or any of the younger bulls which Mr. Tully offers would make safe buying for anyone wanting something a little better than the best usually obtainable.

Beaver Meadow Farm is three miles from Athelstan, and four miles from Huntingdon. It can be distinguished by a round barn painted white of which Mr. Tully is justly proud. The herd bull is black and leads the skin milk, consequently his young stock are well grown and in good flesh. Incoming purchases of Ayrshires would do well to get in touch with Mr. Tully before saying elsewhere.

WOODSTOCK AYRSHIRE SALE.

WE would direct the attention of any of our readers interested in Ayrshire Cattle to the exceedingly high-class lot to be sold at Woodstock, Ont. on Wednesday, Dec. 19, under the auspices of the Southern Counties Ayrshire Breeders' Club. A number of the champion R.O.P. cows of Canada have been bred in this district, and some of the best have been secured through the consignment sales held by the club. On this occasion there are 6 cows and 19 yearlings to be disposed of. These young bulls are a particularly well bred lot and possess good type.

Mr. F. H. Harris, Mt. Elgin, is putting in seven head, five of which are two extra choice bulls, sired by the famous Masterpiece, the cow Duchess of the Forest consigned by him will, no doubt, be one of the prizes of the sale. In appearance, she is very much like Scotch Thistle, the holder of the present three year old championship R.O.P. record. She is sired by a son of the ex-world's champion, Jean Armour, while her dam is a half sister to Lady Jane, the champion Ayrshire of 46 O.P. cow of Canada.

Mr. J. A. Morrison, Mt. Elgin, is, as usual, putting in some of the top notchers of the sale, and he will be disappointed, we imagine, if Scotch Thistle fails to secure the highest bid in the sale. She is a half sister to the champion Scotch Thistle, and is a magnificent cow.

MacVicar Bros., Belmont, are putting in four head of good cows, mostly all being rich in Durelough blood. Mr. R. J. A. Smith, Hatchley Sta., who has bred so many good producing cows, will have three females in the sale. Mr. W. B. Robinson, London, is putting in a couple of good cows, including a half sister to the champion Lady Jane.

Mr. Jack Collier, Woodburning only one fine young cow on this occasion. Mr. Thos. Denzau, Grandview, is putting in two females and one bull of serviceable age. Mr. Wm. Thornhill, Lymloch, is consigning one young bull and some choice young cows. One of them, Aggie's Pride of Trout Run, unless we are miserably sought will be one of the most heavily submitted after cows in the sale. She is a half sister to the famous Holthouse Flirt. Mr. B. Stansell, Vienna, and J. L. Stansell, Pirarfordville, are each putting in six females and two males, one of their young stock is particularly choice. It is doubtful if two more good lots have ever been consigned to any of the club sales than Selwood Flirt and Selwood Ormsby Lads. These calves are both being by the noted prize winner, Selwood Pretzel 1st, and are a fair sample of the corn crop in their district this year, the Meers J. L. and B. E. Stansell are reducing their herds for the winter, and giving the public the opportunity of securing a number of the present high standard well bred, typey cows, which will either be fresh at time of sale, or due to calve shortly.

Messrs. McConnell & Ferguson, London, are putting in three cows. One of them, Fairfield's Beauty, is a noted prize winner and has given over 60 lbs. milk. Mr. Herd's Beauty, who is being the number of consensuers up to the round down. To Mr. Brown other great production of breeding the present R.O.P. champion, Lady Jane, and many other high class cows. He is putting his various consignments of them being such a high-class one that she will, without doubt, be one of

the togetherness of the sale. All six ancestors mentioned in her pedigree, are in the Record of Performance. She is of the Brockside breeding, and from the noted Victoria family. For further particulars, write the Secretary of the Club, Mr. John McKee, Norwich, Ont., also for a catalogue.

VERMONT AYRSHIRE BREEDERS.

THE Vermont Ayrshire Breeders' Club held their annual meeting this fall at the home of Mrs. F. D. Edwards. About 150 breeders were present, and they had a most enjoyable time. The guest of honor was Mr. John McKee, of Norwich, Ont. He presented the great cow, Jean Armour, now owned by Mrs. Edwards. "I have never seen a good cow for years yet," said Mr. McKee, in conversation with an editor of Farm and Dairy, on his return from Vermont.

"And what was your particular mission to Vermont?"
"Oh, I guess the Vermont men just wanted to have a look at the breeder of Jean Armour," responded Mr. McKee, with his jolly laugh. "At any rate they sent me a most pressing invitation to go along and I went."

SCOTTISH AYRSHIRE BREEDERS PROSPEROUS.

PRICES of well bred Ayrshires in Scotland are at present exceedingly high. Breeders are finding it difficult to raise enough stock to supply the demand of the market. At the annual meeting of Grimsby, during a chat with an editor of Farm and Dairy at the Toronto Ayrshire classes at the Canadian National this week, we were told by Mr. Wm. Hunter, of Inverness, who is in Scotland this summer for the purpose of importing a consignment of pure bred for the Ayrshire sale held at Springfield, Mass. on June 16th. "Thirty-five head of Ayrshires were contributed to the sale," said Mr. Hunter, associated with Adam W. Montgomerie, of Lismacnoose, Ochiltree, Scotland.

"The breeders find that culls such as formerly had been sold over to the butcher's block, now sell readily in the various sales rings at prices ranging about \$100," said Mr. Hunter. "Sellers thus turn their plainer stock into money and are not losing any animals to strengthen their herds. Prices for ready stuff are, therefore, high on buyers' markets. In fact, we have seen certain two-year-old bull in our consignment and we were looking for one in Scotland. As he was intended for the Springfield sale, we, of course, did not take advantage of the offer. Mr. Hunter brought but \$1,000 in Springfield, Mass. This was found to be a very low price, but prices at present are higher for good stock in Scotland than in America."

"Why is the demand for the Old Country Ayrshire trade?" he was asked.
"It is difficult to diagnose the cause," replied Mr. Hunter. "The demand is certainly not caused by the export of breeding animals. Except for American markets, the export of Ayrshires is practically nil. The demand seems to be more within the country itself. The Scottish breeders have money and they are out to get it wherever quality stock is to be obtained."

"How have you found conditions in the United States with regard to Ayrshires?" Mr. Hunter was further asked.

"Ayrshires were booming in the United States," replied Mr. Hunter, "but since the Americans have gone into the war, breeding work has been hanging in the balance. The export of the Ayrshire breeders throughout the United States are the country's big business men. They strain better prices than they are in looking to the conservation of food and the obtaining of the highest prices for their cause than to neglect to some extent their work in dairy cattle breeding."

The instance of the American's capture of industry which had been counted upon as supporting the export of the Ayrshires, and who because of their being required to assist in solving the national problem of the war, have been subjected to their entry into the war, were unable to attend, was cited.

THE AYRSHIRE MINUTE BOOK.

THE minutes of the directors' meeting of the Canadian Ayrshire Breeders' Association, containing constitution, by-laws, rules of entry, rules of points, rules and regulations for Record of Performance, etc., are published in a volume of 124 pages which is now available to members of the association. Included in the record are Canadian Ayrshire cows in R.O.P. test during the past year, with an additional list of all records held by Ayrshire cows in Canada to date. An attractive feature of the minute book is the many excellent illustrations of Ayrshire cattle. From this year's book we learn that although only 187 to 183 mature cows gave a yearly average of 10,110 lbs. of milk; 416 to 137 lbs. of butter. Ninety-seven two-year-olds gave 9,504 lbs. milk, 439.77 lbs. fat.

Three hundred and ninety-seven two-year-olds gave 7,663 lbs. milk, 313.18 lbs. fat.
Average for 571 cows and heifers, 8,793 lbs. milk, and 367.27 lbs. fat.
Average per cent. of fat .87.

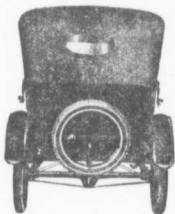
THOROUGHBREDS



King Ormsby Jane Rag Apple



Illustration showing instrument Board on Chevrolet Four-Ninety. Electric starting and electric lighting switch, speedometer, electric horn, ammeter, oil indicator light equipment, gear shift lever. The Four-Ninety has selective sliding gear transmission with three speeds forward and reverse.



Rear View showing extra tire, tire carrier, and tail lamp with license bracket attachment.



Showing robe rail, foot rest, door pockets and hand pads.

\$53,200.00 seems a big price to pay for a five month's old calf yet this is what D. W. Field, of Brockton, Mass., paid O. Cabana, Jr., of Buffalo, for the Holstein Bull Calf here illustrated, King Ormsby Jane Rag Apple, in June, 1917.

But the price does not seem too high when the records of "King Ormsby's" ancestry are known. Every one is a record breaker. His sire brought \$25,000. at auction; his dam holds many records for milk production and for generations expert Holstein Breeders bred with the greatest care the strain resulting in King Ormsby Jane Rag Apple.

The Chevrolet Four-Ninety—the Product of Experience—is a thoroughbred motor car and would cost much more than \$53,200 were we to build only one car. But mammoth production and efficient management enable us to manufacture the Four-Ninety in such large quantities that the cost is reduced and is within reach of the average man's purse.

The complete equipment, comfort, beauty, power and efficient mechanism makes the Chevrolet Four-Ninety the best car for the Canadian farmer.

Send for catalogue giving description and price.

CHEVROLET MOTOR CO. OF CANADA, LIMITED

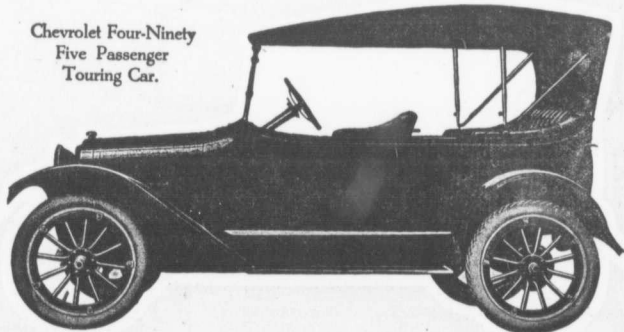
OSHAWA, CANADA

Western Parts and Distributing Branches: Regina and Calgary.

OVER 800 DEALERS THROUGHOUT CANADA

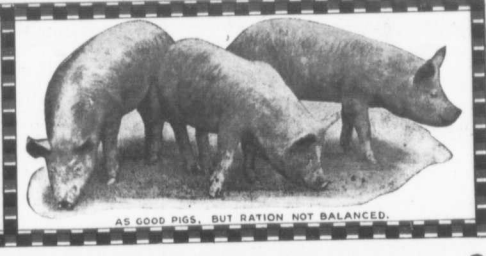


Chevrolet Four-Ninety
Five Passenger
Touring Car.





FIRST CLASS PIGS, RESULT OF BALANCED RATION.



AS GOOD PIGS, BUT RATION NOT BALANCED.

Cut the Feed Bill---Increase the Profits

Some men seem born with this gift. Others through study or experience acquire the ability. Compared with some other feeders these experts can do three things:

With the same number of livestock they make equal gains on less feed.

With the same amount of feed they can keep more animals and make greater total gains. With each pound of feed thus giving maximum results they make a greater profit on feed consumed.

HERE IS A PRACTICAL EXAMPLE

One man fed 7 pigs on corn alone for 180 days. They averaged 75 pounds at the end of the feeding period. Another fed 7 pigs corn on alfalfa pasture for 80 days and corn and alfalfa hay for 100 days. In the same length of time this second lot averaged 135 pounds. Farmer number 2 used his feed to better advantage and made good money by doing so.

There was a Reason, of course, for this great difference. Corn alone makes a one-sided ration—it is high in those materials producing fat, heat and energy, but low in those producing bone and muscle. Corn and alfalfa on the other hand make a fairly well balanced ration as alfalfa is high in those elements producing muscle and bone. Hence the second lot of pigs was kept growing steadily while the first lot was stunted and could not become profitable feeders.

Now, This Successful Feeder happened to know all the scientific aspects of feeding. Many another expert feeder, however, who is not versed in science obtains just as good results. By long experience he knows what combinations of feeds given to different kinds of stock will make largest gains. The chief thing after all is a practical knowledge of how properly to mix feeds—in other words how to balance rations.

A Little Scientific Knowledge, however, will be of assistance to the beginner or the feeder without long experience, in more quickly mastering the art of most successful feeding, while it will enable anyone to a most important point. Great care must be taken to utilize every pound most efficiently. More than the profit of the individual depends upon it—the fate of the nation may very well hang in the balance.

A FEW FEEDING FACTS WORTH REMEMBERING

Protein is the name commonly given to that portion of the food which builds up lean flesh, muscle, brain, heart and other internal organs, blood, skin, hair, wool, horn, etc. Without it the animal cannot grow, or even replace worn out material. For young growing animals, cows producing milk and horses hard at work it is especially important.

Fat is a very concentrated form of feed and produces animal fat, heat and energy. It is especially required by all fattening animals.

Carbohydrates is the name given another part of the feed which has the same action as fat, only is less concentrated.

Crude Fibre is a term applied to such feed as the woody part of hay and straw, oat hulls, etc. It is largely indigestible, especially by horses and pigs.

Balanced Ration. By "ration" we mean the amount of feed consumed by any animal in 24 hours. By "balanced" we mean a ration which supplies these various food elements in the proper proportion to serve our purpose according to the age and kind of animal. If more protein is fed, for instance, than the animal requires, it is wasted; if too little is fed, the animal will not develop properly. To provide enough of each food element without waste constitutes skilful and profitable feeding.

But This Requires Much Calculation. The ration must be calculated according to the requirements of each particular kind of animal, its age, and its purpose. Then the composition of each kind of food must be known as the proportion of these elements vary in each one. Suppose, for example, a man is feeding pigs and has 600 bushels of oats. Since oats do not make first class pig feed, it may pay him to sell them and use the money received to buy middlings. More pounds of pork could be secured from the middlings than if the oats were fed. Many similar problems occur in calculating the most profitably balanced ration for any kind of live stock.

THE ONTARIO DEPARTMENT OF AGRICULTURE WILL DO THIS FIGURING FOR YOU

The Department in this year of stress, as in every other year, is desirous of cooperating in as close and practical a manner as possible with each farmer in the Province of Ontario. Experts within the Department, will be glad to assist any farmer in calculating his most profitable ration, free of any charge.

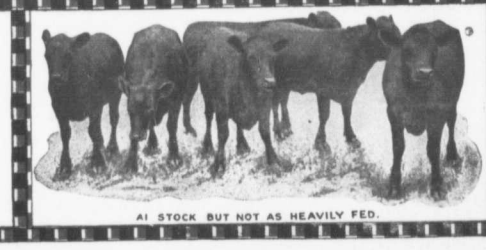
The following information will be necessary in making such a calculation: What kind of stock is to be fed and for what purpose, whether stock is mature or immature, just what feed is on hand—whether grown stock or already purchased—what feeds may be conveniently purchased in the neighborhood and the local prices of the same.

If any Ontario farmer will send these details a balanced ration will be calculated for him. Full information upon any phase of feeds and feeding will be sent promptly upon request. Write the Office of the Commissioner, Department of Agriculture, Parliament Buildings, Toronto, Ontario.

Ontario Department of Agriculture Parliament Building, Toronto

SIR WM. H. HEARST,
Minister of Agriculture

DR. G. C. CREELMAN,
Commissioner of Agriculture

GOOD BUTCHER STOCK
SKILFUL FEEDING DID IT.

AS STOCK BUT NOT AS HEAVILY FED.