

# FARM AND DAIRY

&  
RURAL HOME



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Toronto, Ont., November 23, 1916

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# FARM AND DAIRY



We Welcome Practical Progressive Ideas

## & RURAL HOME

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. XXXV

TORONTO, ONT., NOVEMBER 23, 1916

No. 46

# The Organization of Milk and Cream Producers' Associations

## The Need of Organization—Initial Steps—Objects to be Attained and Dangers to be Avoided

By R. D. COLQUETTE, B.S.A.

THE producers of milk for city consumption, when acting singly, have difficulty in arriving at what the milk rate should be. When a dealer can come to a man and say, "Here is my price, your neighbors have agreed to take it," and that man has no means of ascertaining the consensus of the producers' opinion regarding the market value of milk, he is at a disadvantage in making his contract. Even if he has talked the matter over with his neighbors, and there is understanding between them, there is still a possibility of one community being played off against another, and of the price being thereby depressed. To meet such conditions, as well as to improve the quality of the milk supply, to mitigate unfavorable shipping conditions, and to look after the interests of producers generally, is the object of every well-conducted milk producers' association. Although there are now many such associations in successful operation still more are being formed. There is, therefore, a demand for information as to how organizations of milk producers can best be effected, and what the objects of the associations should be. It was to secure additional information on these important matters that I recently journeyed to the home of Mr. A. J. Reynolds, Durham Co., Ont., who, for many years, has filled the position of secretary of the Toronto Milk Producers' Association with conspicuous success, and who is therefore qualified to speak with authority on the problems that confront the producer of city milk.

### The First Step.

"The best time of the year to start proceedings in the organization of a milk producers' association is in the fall," said Mr. Reynolds. "At that season the demand for milk is strong, and there is greater assurance of gaining recognition at the hands of the dealers. There is the additional advantage that both officers and members have more time during the winter months to complete the work of organization than they have in the busier seasons. If the proposed organization is to cover the entire territory from which milk is contributed to a city, so much the better, though associations covering only part of such territory are being successfully operated in some sections."

The first step in organization is to call a meeting of those directly engaged in the production of milk within the district to be covered. This meeting should be well advertised in order to attract the attention of every farmer interested. After the appointment of a temporary chairman and secretary the business of the meeting may be proceeded with. This is to discuss matters in general, to decide whether an organization be formed and to confirm or modify the proposals of those who called the meeting as to the territory to be covered by the organization. Having decided to organize, the next step is the appointment of a

committee to draft a constitution. In the drafting of this important document, it is wise to make use of the experience of other and similar associations, and it may be necessary to give the committee some time in which to do their work. It helps greatly to expedite matters, however, if the information necessary for the drafting of a constitution has been collected, and at least a tentative constitution is ready for presentation at the



### Milk Producers' Association Membership.

ANY farmer may become a member of an association upon the recommendation of a member and by sending his name to the secretary-treasurer, accompanied by the annual fee.

### Objects.

1. To encourage the production of pure, wholesome milk for city consumption.
2. To establish uniform prices for that milk.
3. To secure better shipping facilities on railroads.
4. To protect the interests of producers generally.

### Board of Directors.

The Board of Directors consists of a president, a vice-president and a secretary-treasurer assisted by directors. They are elected annually. Their duties are to conduct the general management of the association, to promote the welfare and prosperity of the trade, to investigate charges, disputes and difficulties of a financial character, and render their award.

### Meetings.

An annual meeting, to be held at the time and place appointed, and at which the election of officers takes place. When circumstances demand it special meetings may be called at any time by the Board of Directors or by the President.

meeting. This assists in getting the association off to a good start so that it can at once get down to the business for which it was organized without experiencing the delay that would be occasioned in calling another meeting for organization purposes.

The constitution deals with such matters as the name of the association, its objects, the terms of membership, the constitution of the official board, the time and place of annual meetings, the filling of vacancies on the board, and the making of amendments to the constitution and by-laws. The treatment of cases of infringement against the constitution and by-laws may also be set forth. Upon the adoption of this constitution a roll of members may be opened and the executive elected. With the Toronto Milk Producers' Association this board formerly consisted of five trustees, but upon the extension of the activities of the association to include the cream producers, the board was increased to six. As set forth in the constitution the officers of the association, namely, the president, vice-president, and secretary-treasurer, are elected by the board of trustees from among their members on the same day as that on which the annual meeting of the association is held. After the appointment of the trustees and officers, by-laws and regulations may be introduced and passed. These in general have to do with the duties of the various officials of the organization, the order of business for the general meetings and the rights and privileges of members at such meetings.

### Plan of Organization.

In districts tributary to small cities, which can be conveniently covered by a single organization, it is not necessary to have local or branches. In such districts many of the producers deliver their own milk and do not depend upon their contracts with dealers. In such districts, the chief business of the association will be to bring members together in order that they may decide what the milk rate should be and to deal with consumers' or other organizations in matters affecting the general welfare of the members.

Where the district covered by a milk producers' association is large so that it is impossible to secure frequent meetings of all those interested and difficult to keep in touch with the local conditions that exist in each community, a more complex system of organization is required. It is then necessary to organize local unions. A unit usually composed of those along a wagon route, or of shippers who deliver their milk to the same station. The chief business of the local union is to make arrangements regarding the loading of the cans, to settle grievances, to keep the central posted on the local conditions that prevail, and to collect the annual fees, forwarding these to the central after keeping out an amount



# Elmaple: A Progressive Pr. Edward County Farm

The Improvements That Have Come With the Change From Grades to Pure Breeds

By W. G. ORVIS.

**M**OST of us appreciate the value of improved methods of farming and are impressed with their significance when we meet a man who by their application is making money. It is easy, therefore, to realize my enjoyment of a short visit at the home of Mr. J. E. Huff, Prince Edward Co., Ont., and the profit derived by observing at first hand his methods and plans of farming.

Elmaple Stock Farm was purchased by Mr. J. E. Huff, the father of the present owner, about 45 years ago. In common with the prevailing system of farming at that time, the production of cereals for market purposes was the chief concern of Mr. Huff. After six years of farming the father built a store on part of the farm, and for 39 years has been carrying on a general merchant's trade there. For 36 years of this time

## From Grades to Pure Breeds

**M**OST of the men who are achieving the greatest success in the dairy field in Canada are men who have graduated into the pure bred live stock business through experience with grades. This confirms the accepted belief that experience is essential in the successful handling of pure bred cattle. This experience must be broad enough to take in all the details of breeding, feeding, care and management of the animals, and in most cases must include the providing of the feed, the housing of the stock, and the financing of the whole concern, all of which require a man of no ordinary ability. We are planning to publish a series of articles in which will be told the stories of some of the farmers who, after successful experience with grade dairy cattle, have worked their way on to still greater success with pure breeds. The first of the series appears herewith. Read it and watch for those which will follow. The record of wages has been accomplished is full of inspiration for those who, though still on the lower rounds, are climbing the ladder of dairy success.

the neighboring farmers sought this place of business for their share of His Majesty's mails, and but for the advent of rural delivery Mr. Huff would probably still be a servant of the people and of the government in the capacity of post-master.

The operations on the farm for many years, as well as the store, were under the direction of Mr. Huff. Not until Mr. Morris Huff reached the age when he could assume control could the father release this hold. It was under the father's management that the first start was made in Holsteins. About 30 years ago Mr. H. Williams imported a small herd of pure bred Holstein cows into the county of Prince Edward, and Mr. Huff used this sire on two of his grade cows. The service fee paid was \$10. There are still three cows in the Elmaple herd that are direct descendants of this cross. The younger Mr. Huff remarked to me that he could not remember when there were not black and white cattle on the farm. These grade cows are of excellent type and cannot be distinguished in appearance from pure breeds.

### The First Pure Bred.

The satisfaction received from this herd of grades was so great that it was not until four years ago that pure breeds were purchased. A two-year-old heifer in calf was bought, and she has had three heifer calves and her two oldest daughters have each had a heifer calf. This makes the nucleus of a first-class pure-bred herd.

Another cow has since been purchased, and with her progeny the two families make up a herd of 10 females. When speaking of the pure breeds as compared with grades, Mr. Huff said:

"Our young heifers have milked up to 60 lbs. a day, a feat we never achieved with grades, and this year we have averaged, with one cow less, 1,100 lbs. more milk a month at the factory than last year. Our two-year-old heifers this year gave more milk than our best cows before we got pure breeds."

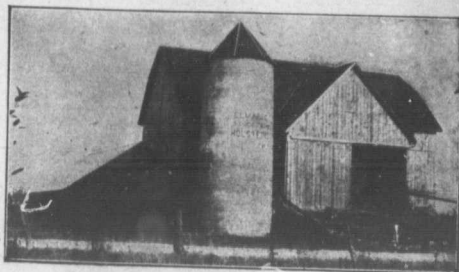
Realizing that success with any kind of cattle depends largely upon the way they are handled and fed, Mr. Huff has so arranged his farm that a large amount of feed of the kind most valuable to his cows is available! A rough inventory of feeds on hand amply demonstrates the way in which the Elmaple herd is provided for. Three hundred bushels of grain carried over from last year; 30 loads of alfalfa hay in first-class condition in the barn; 600 bushels of this year's grain; one ton of oil cake bought before it became so high in price as at present; two togs of Schumaker (a patented food), bought early in the season; a large quantity of good hay; all the straw grown on the farm, and a silo 12 x 35 feet about three-quarters full of good ensilage. The farm upon which the bulk of these feeds was grown is 100 acres in size, and the soil is limestone clay with an admixture of gravel. It is strong land and produces well, in this respect being typical of much of the soil of the county. The rotation followed is the standard four-year one, 20 acres of the land being kept out for alfalfa and the other 80 acres cropped in the ordinary way.

### The Sidelines.

For many years canning factory products were grown to good advantage, and for several years beans have added considerably to the farm revenues. From three acres in 1915, 65 bushels were threshed and sold for \$3.25 a bushel. This year six acres were planted and were being threshed on the day of my visit. The yield compared with last year was poor, but the price was much better as buyers were paying nearly \$5 a bushel for them. In 1915 Mr. Huff won first prize in competition with 20 entries in oats in the Standing Field Crop Competition, again showing

that the farming methods are thorough and productive.

Six acres of orchard trees were set out four years ago. These have made excellent growth, and are carefully tended. One feature of this orchard worthy of note was its low heading. Almost all the trees were of the most approved type of low heading, yet in no way hindering the working of the land. In a few years more the fruit from this orchard will be another line of revenue added to that already derived from Elmaple farm.



The barns on Elmaple Farm, the home of J. E. Huff, Pr. Edward Co., Ont. Mr. Huff believes in advertising. Note the farm name on the sign. —Photo by an Editor of Farm and Dairy.

Hog raising has not been very closely followed, but at the time of my visit two young sows had a combined litter of 23 healthy youngsters a few weeks old. If the price of pork keeps anywhere near what it has been for some time, these porkers will bring in considerable cash six months hence. Having this bunch of pigs coming on to make profitable use of the by-products of the home dairy for the next five months, why and a result of forethought, to which other breeders of my acquaintance would find it to their advantage to take heed.

### A Record of Increasing Yields.

Among the many interesting things seen on this farm, none reflected more its systematic and businesslike management than the records kept of the herd. A synopsis of this record was published in October 12 issue of Farm and Dairy. We here repeat it in part because of its significance.

Seven years ago, when the first records were kept, the average production for each cow was 6,000 lbs. milk. The cow thought to be the best in the herd before the scales were used, gave the first year of test 5,400 lbs. of milk. The average production for each year since 1909 is given herewith. The figures are worthy of careful study as they tell a tale of how, by weeding and selecting, not pursued without discouragement, yields may be improved:

(Continue on page 8.)



Some of the Matrons in the Holstein Herd on Elmaple Stock Farm. Their owner is graduating into the breeding of pure bred Holsteins. The herd contains both pure breeds and grades, but they are so alike in type and conformation as to be scarcely distinguishable. —Photo by an Editor of Farm and Dairy.

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### My Taxes: Fixing the Ratio of Contribution

(Continued from Page 2)

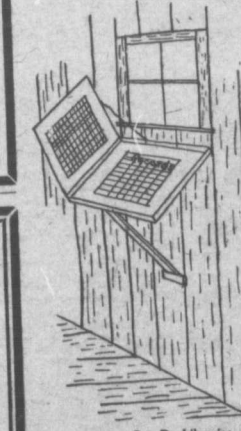
of the rent, for I must live, must eat, alysis comes my maintenance; the two acres or whatever it be that feeds and clothes me pays the rent, which ultimately falls on me.

In the days of King John of Magna Charta fame, the poor, oppressed public, whom to-day we pity as king ridden, oppressed and downtrodden, would not, for a moment, endure the taxes and roads as now levied bystate and landlord upon the common people. The American Constitution declares that no tax shall unequally be assessed. Some day a greater Charter of Liberty than even that secured at Runnymede shall be written, namely, that no tax whatever shall be levied upon a free people. One let the people grasp the fact that the final ownership of all the land, all natural resources is in them, subject to their rights by the occupant and their assigns as tenants, and the rent will meet the public requirements for which now taxes are levied.

How this would work out in practice, whether the farmer would be ground in pieces by the burden, or whether a readjustment or elimination of other and not realized burdens might not meet that counterbalance, remains, does not alter principles. Possibly Farm and Dairy can produce figures and statistics upon which our folk can draw conclusions.

### A Convenient Record Device

**H**ERE is a convenient device for keeping milk records, attached to the wall of the milk room and right convenient to the milk scale is a box-like affair with a swinging cover. Open up the cover and there is the milk record for the month, with a lead pencil right at hand. During milking this record box is supported from the wall by a movable "leg," thus making of it a



**Anyone Can Do Likewise**

convenient counter. When not in use the "leg," which is attached to the record box, is pulled off its support and the whole hangs flat against the wall, wet out of the way.

On the inside of the cover is a second sheet, on which is kept a record for date of service, sire used, and date of freshening for each cow in the herd.

### Wayside Gleanings

By W. G. Orvis, Field Representative, Farm and Dairy.

#### A Creamery Disaster

**D**O accidents ever happen in creameries? For answer, ask those who work in them. One man recently told me a story of a rather serious accident in which he figured to his sorrow. A can of cream had come in by rail. The creamery man went to take the lid off the can, but found that it would not come, so he picked up one of the weights of the weigh scales nearby and hit the rim of the lid a sharp rap. Instantaneously there was trouble. The lid flew off and hit the ceiling and came back to the floor with a force that was astonishing. The worst part of this little affair was discovered at this point of the proceedings. The man became aware that his head had been directly in line of travel of the lid in its rapid ascent and that blood was beginning to flow. He nursed a black eye and a disfiguring cut, for some time. Yes, but what about the cream? It surely was not the kind from which the highest grade of butter could be made. The owner of the creamery was not taking the proper care of it in order that it would reach the creamery in good condition. He could have had three charges laid against him—first, he was hurting his own business; secondly, he was damaging the whole Canadian butter industry and thirdly, he was endangering other men's lives.

#### A Preventable Loss.

There is a farm in Ontario county which has been under cultivation for at least 50 years. In one field there existed about an acre of wet, sprinky land on a gently sloping hillside. This acre of land had had been worked for many years, the cultivation year after year stopping as soon as the land became wet and spogy. Consequently it had grown up with willows and scrub. Think of the loss in time, labor around this place with plows, cultivators, binders and wagons. Think of the loss of crops from the drowned land near and below it. Think of the value of the crops that this land would have grown if it had not been wet. When all these have been considered, estimate his loss.

It so happened that the former owner of this farm did not make his time sold out to one of his neighbors. The new owner cleared this acre of its growth of willows and other shrubs the first year, plowed the land, dug out the stones and the next year, his second year of ownership, is putting in drains to get the water off. An estimated cost of tiling this wet acre is given at about \$50. Let us set this amount over against the estimated value of the other man and see if we have a clue to the reason why he sold his farm to his neighbor.

"That's a fine umbrella you carry, isn't it?"  
"Yes."  
"Did you come by it honestly?"  
"I haven't quite made it out. It started to rain the other day and I stepped into a doorway to wait till it stopped."  
Then I saw a young fellow coming along with a nice large umbrella, and I thought if he was going as far as my house I would bet the shelter of his ramp. So I stepped out that umbrella, young fellow?" and he dropped the umbrella and ran."

## PO

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**I**T is the 3 yards of a quantity the veteran, beginner, and best care, expense, but something is for it.

To the ve tion is worth cure, He b slight ailments a down-right On the farm building that cagers. If it a cold, it is of these cag grain quinine might in su a week's however, the from a half whiskey is waler. If th bathed with with vaselin seeds to grow.

If a droopy moved to a pill, and in change for worse, off goe

Exercise an the keynotes for a hen to say that the Keep them c careful that as will overbuoy, and in her board and her owner. I the interior of and fall. It is the place and A-3 here. There can be allowed to thr it is not al house entirely but by strict to keep them numbers that lar damage.

the manure d premises ever or so we pour and in the and sprinkle i nest material, see a loose, an "some linc from some ot If more care louse question, that the flock w will be lost era." Is it no hear of ravag invariably is i either a begin Another good disease is to do month or so them. Take a set it in the take a pound o a newspaper, a ~~newspaper~~ and out of the hou light to the pen and close take long before pen will be lit burn for an which open up



**Preventing Disease**

Michael K. Boyer.

It is the truth sickness visits the yards of the beginner more frequently than it does the yards of the veteran. And why? Surely the beginner aims to give his flocks the best care, sparing neither time nor expense, but with all that there is something lacking—there is a reason for it.

To the veteran, the art of prevention is worth more than the art of cure. He believes in doctoring the slight ailments, but will not tolerate a down-right sick bird on the place.

On the farm of the writer there is a building that contains a number of cages. If it is noticed that a fowl has a cold, it is at once removed to one of these cages and treated to a one-grain quinine pill each night for three nights in succession. Generally, in a week's time the bird is well. If, however, the cold should be a bad one, from a half to a full teaspoonful of whiskey is added to the drinking water. If the face is swelled, it is bathed with hot water and rubbed with vaseline. If after that the bird seems to grow worse, off goes the head.

If a droopy fowl is found, it is removed to a cage, given a family liver pill, and in a week's time there is a change for the better or worse—if worse, off goes the head.

Exercise and the proper food are the keystones of success. It is natural for a hen to be busy, and it is safe to say that the idle hen is not a well one. Keep them in good health, being careful that they do not get such food as will overfatten, and they will keep busy, and it is the busy hen that pays her board and leaves a net profit for her owner. It will pay to whitewash the interior of every pen both spring and fall. It is the only way to sweeten the place and keep down vermin.

Acc here, too, is another point. There can be no health where lice are allowed to thrive. With all precautions it is not always possible to keep a house entirely free from these pests, but by strict cleanliness it is possible to keep them down to such small numbers that they can do no particular damage. We not only clean up the manure daily, and whitewash the premises every year, but every week or so we pour kerosene on the roosts, and in the corners of the nest boxes, and sprinkle insect powder among the nest material. It is seldom that we see a louse, and if we have a bird that has "gone light" or is droopy, it is from some other cause than vermin. If more care should be given to this louse question, as well as in feeding so that the flock will not overfatten, there will be less cases of reported "cholera." Is it not strange that when we hear of ravages of cholera it almost invariably is among the flocks of either a beginner or a careless man?

Another good method for preventing disease is to disinfect the house every month or so by burning sulphur in them. Take an old iron vessel and set it in the center of the pen. Then take a pound of sulphur and wrap it in newspaper. See that every window is closed, and that all the fowls are out of the house. After setting a light to the paper get out of the building and close the door. It will not take long before the interior of the pen will be black with smoke. Leave it burn for an hour or more, after which open up the doors and windows

and let the place air well before the fowls are ready to go to roost. This fumigation will not only kill any disease germs that might be in the building, but it will also destroy all vermin that the fumes will reach.

Another common cause of sickness is inbreeding. We realize in saying this that we are apt to raise a discussion, for it is surprising how many of the very best poultrymen in the country still cling to the belief that inbreeding is not harmful! But their number is becoming smaller every year. Inbreeding, no doubt, retains certain markings and characteristics of a strain, but it does not maintain vigor. We find, after quite a number of years' experimenting, that new blood can be gradually added to a flock and not harm the strains' trade marks, but it must be judiciously done. Introducing new blood recklessly is as bad as inbreeding, and therefore the poultryman is compelled to study the question well, and to secure his new blood only from such sources as are in line with his own stock.

**Poultry Pointers**

WHILE it is best at all times to have good, sharp grit constantly before the fowls, it is especially important that grit be supplied when feeding whole oats so that the hulls of the oats, which are very tough and unyielding, will be properly ground. With plenty of sharp grit here is no danger attending oat feeding, although the safest rule is to first soak the oats for an hour in water.

Green bones are bones fresh from the butcher, with the adhering gristle, meat, etc.

The sooner farmers recognize the fact that poultry culture should be followed along the same lines as dairying—giving food and care to secure results—the sooner they will begin to reap the share of profits and become competitors with practical poultry raisers.

Green bones contain the natural juices as well as the adhering substances, making it superior to the bones that have lain on the ground for a while and lost all the natural juices or animal matter. Green bones are also more soluble and capable of having the mineral matter dissolved.

In parts of England turkeys are fattened chiefly on Indian corn, scalded Indian meal and boiled potatoes, with home grown corn for a change.

It is claimed that the most delicious, juicy broiler that an epicure can fancy is a turkey poult of about six pounds weight, or when about two-thirds grown, and of medium size. Many a young male two-thirds grown would be too large to broil; if rather large, however, the breast may be gashed, and thus more easily cooked through, but it must not be dried.

The following facts on marketing turkey feathers are well worth remembering: The quills from the third joint or tip end of the wing are called pointers, and should be kept separate. In picking, keep tail and wing feathers separate. Tie each kind in bundles by itself, and press the bundles in the boxes lightly. All feathers must be clean, sound and dry-picked. The wing quills, which have all plumage on both sides of the quill, which come from the first and second joints of the wing next the body, are more valuable than, and should be kept separate from, the pointers. The tail feathers should be kept by themselves, and are the most valuable. The short tail and wing quills, if saved, should be kept separate from the long ones, as they depreciate their value if mixed with them. The directions for shipping are to mark the correct weight and tare on the boxes, also the name of the shippers, and ship as "turkey quills."

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**The Organization of Milk and Cream Producers' Association**

(Continued from page 4.)

for six months, but now winter brings rule for seven months of the year, beginning Oct. 1st. This year, in fact, one large dairy company in Toronto voluntarily advanced the price to the winter rate on Oct. 1st, though its contracts did not call for a rise until a month later. The benefits of organization of milk producers is chiefly of protection for plants. The covering of the majority of biennials and perennials is absolutely necessary. We cannot adopt the same covering for every plant, for plants vary so much in their constitution as does the human race. Some growers cover with long litter, others with warm stable manure, some leaves, and a great number with an accumulation of rubbish of all kinds. With quite a number the results have been most disastrous.

Having devoted time and study to this operation, a word or two on the subject may not be amiss. In the majority of instances nature's covering should be used where it is possible. The accumulation of leaves just as they fall is a lesson which would any pig pay all true lovers of plants for a little careful study. I have covered biennials such as pansies, forget-me-nots and campanulas with long litter, and have covered them with dry leaves with this result: The plants covered with leaves pulled through the winter with splendid results. Of those covered with long litter seventy-five per cent. were lost. I particularly noted this result last season. Hollyhocks, anemone, nallia, foxgloves and pansies were left to take care of themselves, but nature comes to the rescue, had pity on them and covered all with leaves. Every plant survived the winter and flowered beautifully this past season. Others of the same variety were carefully covered with long litter and seventy-five per cent. were lost. I could give numerous instances where nature's covering proved to be most effectual.

**HORTICULTURE**

**Winter Protection of Tender Plants**

Wm. Allan, Toronto, Ont.

**D**IFFERENT authorities entertain different opinions as to the need to be protected for plants. The covering of the majority of biennials and perennials is absolutely necessary. We cannot adopt the same covering for every plant, for plants vary so much in their constitution as does the human race. Some growers cover with long litter, others with warm stable manure, some leaves, and a great number with an accumulation of rubbish of all kinds. With quite a number the results have been most disastrous.

Those anxious to preserve plant treasures should not be in too great a hurry. Let your plants freeze up, then cover with a few dry leaves. To keep the leaves from blowing away place a few light branches of any kind on top. When cold frames are at hand they can be used to great advantage. Pansies, cantanberry bells, forget-me-nots, and such like can be lifted and planted in the frames, then covered with sashes.

Nothing is more absurd than to cover or envelop roses in straw. It only means comfortable quarters for mice and rats. The finest and only protection roses should receive is the hilling of the soil over the crown of each plant, so that fully ten or twelve inches of the entire plant is under the soil. This operation must be done before the ground freezes too hard. After the ground is thoroughly frozen leaves or long litter can be used to advantage. Some advocate burying entirely the roses. Climber roses are best taken from the trellis and laid flat on the ground. Cover with at least ten or twelve inches of soil. In the spring all the wood should be in good condition.

I would strongly advise all lovers of plants, particularly such varieties as polyanthus and auriculas, not to be in too great a hurry to cover them. Let nature have her way for a time. Wait until the plants are frozen in the soil. Then administer your covering with whatever materials you have at your disposal. To prevent the harsh winds disturbing the plants place a few branches on top as previously advised.

One will naturally be most anxious to know what shape the plants are in, and will, on the first fine day in

spring, hasten to take off the winter covering. This is a great mistake. Thousands of choice and valuable plants are lost every season through too great hurry in uncovering them, and more parties than through any other cause. Wait until the ground is thoroughly frozen before protecting your plants, so that the sun cannot reach them and make them start too early in growth ahead of time. Bright, sunny weather in the months of February and March hampers premature growth should the plants have more injury to the plants than the most severe cold would.

This article first appeared in the November issue of the Canadian Horticulturist, the companion paper of Farm and Dairy.

**Cleaning Up the Yard**

**I**N the work of making the home attractive, the house yard will certainly need attention. The house will probably need to be straightened and painted, and the walk to the house improved. The well water ought to be examined by an expert, because too often the drainage from the barnyard contaminates it. There may be flowers to wash for, and avoid. If the well is unsanitary, a new one should be dug at another point.

It is a good idea to plant a row of small corders, to shut off the vegetable from the flower garden, and in summer to have several hedges of hollyhocks, to give color. There may be flowers of all sorts, but decidedly not planted in any kettles or boats, or other curious places, but in the earth where they belong. The farmhouse needs only good general built porch. This may be made by merely widening one already existing, but it is best to have it made practically level with the ground, if possible.

**Example: A Progressive Pr. Edward County Farm**

(Continued from page 5.)

	Av. Yield of Milk per Cow.
1909	6,959 lbs.
1910	6,969 lbs.
1911	6,885 lbs.
1912	6,552 lbs.
1913	6,830 lbs.
1914	8,147 lbs.
1915	8,896 lbs.
1916	over 10,000 lbs.

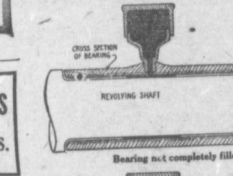
Note the increase in 1910, when some of the herd were disposed of and the falling off of the average in 1911, which was due to a number of heifers coming in and to the two farrow cows milked. Further decrease in the row cows milked. Further decrease in the row cows milked. Further decrease in the row cows milked.

"Among other things that the scales have taught me," said Mr. Huff, "is that it pays to feed cows well when that scale is absolutely necessary and that that water is of paramount importance. We give our cows a small quantity of salt with their grain every other week. The water in our wells gave out this year, and it soon told on the milk flow."

What are the compensations for all this planning and work? It is a question that every farmer who reads this report will ask. The answer is found right on the surface at Elmfrank Farm. There farming is a congenial and interesting occupation, yielding a good return, and the reassuring knowledge that something worth while is being achieved.

**Handling Grease Cups**

**H**ARD oil is used in bearings where the pressure is too great for thin oils, and in other places where only a small amount of oil is needed, says Tractor Farmer. In any event, even though the grease cup is simple, it must be given some real attention. A very common mistake is made in filling by not squeezing the grease down in the top of the cup. When the cup is not properly filled, the first few turns down do not force the grease into the bearings but simply compact it in the



grease cup, as seen by the first illustration. Because of this fact a man may think he has done his part and greased the bearings when he really hasn't. The next illustration shows another thing that happens when this bearing cup is carelessly used. This bearing cup is only partly supplied with grease. The last illustration shows the right way to handle the grease cup. Screw the top down until the bearing is well filled, or until it can be plainly seen that the grease has reached both ends of the bearing.

**Those My**

**T**H E frequent fires in this district, and their probable cause, have been reported its second loss for the year. The causes to be attributed to the gas combustion accepted in the belief that it is responsible for the fact that occurred in a fire. It is felt that these fires would be used throughout since conditions were fair provinces. If, in the barn would not apartment restricted to a... With a view to a scientific experiment of the fire, Prof. of Physics at the recently delayed Farm and Dairy recently been the causes of a... It is a good idea to plant a row of small corders, to shut off the vegetable from the flower garden, and in summer to have several hedges of hollyhocks, to give color. There may be flowers of all sorts, but decidedly not planted in any kettles or boats, or other curious places, but in the earth where they belong. The farmhouse needs only good general built porch. This may be made by merely widening one already existing, but it is best to have it made practically level with the ground, if possible.

It is the pur... thoroughly of the fire, a collecting effort, to scientific some proximate cause will be determined. cleared up, farmers in the have been cominc with intention of a problem facts their inter

**Dete**

**A** LOT of it about the mining simulate simple seem like a great scientist's knowledge of a demand, have no problem of sex been able to, would have been the world and discovery apply. The eldest child families would. The laws would be bred by breeders of the proportion made to conform. Something, regarding the me portion of the or nearly so. vopment the is entirely. This reason nearly kept. To dozen times an heads will com succession, but another an heads and



**Those Mysterious Barn Fires**

THE frequent recurrence of barn fires in Western Ontario has caused intense excitement in the district, and much speculation as to their probable cause. On Nov. 14, Deschambault township, Ontario, reported its second fire within 16 hours, the loss for the two being \$9,000. Of the causes to which the fires had been attributed, insecticide and spontaneous combustion, have been widely accepted in the popular belief. The belief that insecticide is largely responsible is gaining wider acceptance and has been greatly strengthened by the fact that most of the fires have occurred in one section of the province. It is felt by many that were the fires due to spontaneous combustion they would be more generally distributed throughout Ontario and Quebec, since conditions at haying and harvest time were fairly uniform over the two provinces. If, therefore, the conditions in which the hay or grain went into the barn would result in fire breaking out spontaneously, they should not be restricted to one part of Ontario.

With a view to securing, if possible, a scientific explanation of the causes of the fire, Prof. W. H. Day, Professor of Physics at the O.A.C., Guelph, was recently interviewed by an editor of Farm and Dairy. Prof. Day had only recently been appointed to investigate the causes of the fire. "It is now generally recognized," said the professor, "that there is such a thing as spontaneous combustion and that barn fires have originated from this cause. Certainly the conditions this year are favorable to spontaneous combustion. Haying weather was very unfavorable and in many cases the hay went into the barn in a very wet condition. So far I have not commenced the investigation, but I have received one letter from a farmer in Haldimand county in which he states that his hay went in perfectly dry. In this case some other cause than spontaneous combustion would have to be looked for."

It is the purpose of the government to thoroughly investigate the causes of the fire, and it is hoped that by collecting evidence and submitting it to scientific scrutiny, at least the approximate cause of most of the fires will be determined and the mystery cleared up. In the meantime the farmers in the districts where fires have been most prevalent are awaiting with intense eagerness the solution of a problem which so nearly affects their interests.

**Determining Sex**

By J. G. Lechart.

A LOT of nonsense is still heard about the possibility of determining sex. Those who formulate simple rules for sex control seem to overlook the fact that the great scientists with the accumulated knowledge of centuries at their command, have not been able to solve the problem of sex control. If they had been able to solve it, their success would have been heralded throughout the world and the principles of their discovery applied to practical use. The eldest children of all aristocratic families would invariably be boys. The laws would also be made known to breeders of pure bred animals and the proportion of the sexes would be made to conform to market demands.

Something, however, is known regarding the means by which the proportion of the sexes is kept constant, or nearly so. At some stage in development the determination of sex is left entirely to chance. It is for this reason that the balance is nearly kept. Throw up a coin a half dozen times and it may be that the heads will come up the six times in succession, but keep at it long enough, and the time will come when heads and tails have come up an

equal number of times. This may even occur several times during the first hundred tosses. The same law applies in breeding or in anything else, when two alternatives are left entirely to chance. The tendency is to balance up. At some time during the fertilization process this is what happens in sex determination. It is thereby provided that the proportion of the sexes shall always be maintained as about equal, and that the determination of sex shall always be beyond the control of outside influences.

**Making the New Cow Feel at Home**

A. J. Mulligan, Essex Co., Ont.

NOW that auction sales are becoming the order of the day, many dairy farmers will be introducing new cows into their herds. For a while after arriving the new purchases may show indications of falling off in the milk flow. This will continue until she has become fully accustomed to her new surroundings and she can be greatly assisted in becoming so accustomed by careful handling until she feels at home.

Upon arriving at her destination the new cow should be placed in a stall by herself, preferably a box stall, so that she will not be able to see strange cattle. If more than one have been acquired and they have been previously acquainted, it will be best to place

them in each other's company. For a day or two the new cow should be carefully attended and well fed, after which she may be turned out with some of the other dairy cattle, preferably quiet, peaceable cows, and not such as will boss her around, for cows, like boys, are apt to pick on strangers until they see what kind of stuff they are made of. When she has become acquainted she may be placed in her permanent stall. There is always some difficulty in getting her into it at first, but after a few times she gets to know it. Here, in full view of all the other cattle, she is sure to soon forget her old attachments and to feel entirely at home.

**Testing the New Cow Out.**

Unless a recently purchased cow has been previously known by the buyer, a case which seldom happens, it will be necessary for him to become acquainted with her in order to find out the feed and treatment she requires and the production of which she is capable. Each cow requires special study. Her likes and dislikes must be known if the most is to be made of her. If it is known what she has been fed previously to changing hands, it is well to keep her on the same feed for a while, and to change her to the feeds ordinarily fed on the farm gradually. After becoming accustomed to her new feed, her capacity may be found by working her up and noting when she responds to the feeds given her. She should be kept at the point, not of maximum production, but of profitable production. If she fails to give a good

account of herself when tried out by means of the Babcock test and the scales, sell her. This may have been the reason that her previous owner did.

**Dressing Percentages**

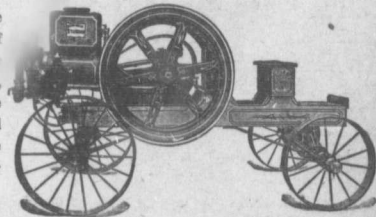
By Prof. W. H. Peters.

THE average dressing percentage of hogs is 75, while of cattle it is 53, and of sheep 48. Part of this difference is due to the method of figuring. In the case of the hog, the hide, head and feet are included in the carcass weight, while in the case of cattle and sheep, the head, hide and feet are not included. Then the hog is very thick fleshed and has a small digestive system. Cattle and sheep have large paunches and digestive systems. Sheep dress out lowest due to the wool and the rather light fleshing of the carcass.

The dressing percentage of animals of each class varies widely. This is due to the amount of flesh, especially fat present on the carcass and somewhat to the fatness of the hide and size of the heads and legs, and to the amount of fill or the amount of feed and water present in the digestive tract at the time of slaughtering. For the hogs the dressing percentage varies from 65 to 85 per cent., with an average of 75. For cattle it ranges from 48 to 70 per cent., with an average of 53, and for sheep from 44 to 56 per cent., with an average of 48 per cent.

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No	Steam Engine Type Governor	Yes
No	Starts Without Cranking	Yes
No	Special Carburetor to Save Gasoline	Yes
No	Vertical Type Exhaust and Intake Valves	Yes
No	Perfect Balance No anchoring needed.	Yes
No	Oversize	Yes

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#### Stock and Seed Judging

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

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

#### Poultry Raising

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

#### Dairying

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

#### Bee Keeping

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

#### Business and Marketing

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

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

G. C. CREELMAN, President.

#### A Letter From Saskatchewan

**E**ditor, FARM AND DAIRY.—An instance of how established business interests can take advantage of the lack of cooperation amongst farmers to fleece them of their hard-earned money occurred in this district some six years ago. The settlers were coming in rapidly and required considerable quantities of lumber for building purposes. The regular line companies controlled the lumber business, and the prices charged were based on the rate of from \$30 to \$32 a thousand for rough lumber and dimension stuff. As this lumber cost f.o.b. \$20 at the station, the prices represented a realization of 33 per cent. and over on the total turnover.

In one of our local towns, an independent lumber dealer started up in business. He secured his stock from a small independent firm, so that the line companies were unable to shut off his supply. In order to put him out of business, it was necessary for them to undersell, and a miniature trade war soon developed. The independent man was without resources, but found that he could handle the business by charging a margin of two dollars for rough lumber over the f.o.b. price. He accordingly sold for \$22 for this grade, prices for other grades being in proportion, but he could not come below these prices. At this the farmers were making a saving of from eight to ten dollars a thousand, compared with what they had previously been charged. The line companies, however, were bent on this man's destruction. They came down to \$21, being willing to sell at a loss in order to put their competitor out of business. The independent man was frank and showed his books to the customers, explaining the nature of the case and the motives of his competitors in selling at a loss to ruin him. The matter was freely discussed and everyone apparently understood the nature of the case. One would have thought that they would stand by the man who was saving them from \$8 to \$10 a thousand on their lumber. But they were new settlers, almost unacquainted with each other. Each man was for himself. He seized the opportunity of selling another dollar, and bought from the line company. The independent man, seeing how things were going, threw up the game and sold out to his competitors. The next morning lumber was selling at \$32 a thousand, and another instance had been added to the long list of cases of the farmer holding the dollar so close to his eye that he could not see the nature of the trap that had been set for him.

Since this incident occurred, the district has developed and it now has a live grain and vegetable association. It has secured considerable supplies from the cooperative department of the Grain Growers' Grain Company. Among other things, lumber and fence posts have been brought in. Our friends of the line companies have made several attempts to destroy our local organization, but have found that there is a difference between the farmers of the district now and the settlers of six years ago. They are dealing now, not with scattered settlers, but with cooperating farmers, and who have learned the lesson that a company saved may be a dollar thrown away. Some insidious attempts have been made to destroy our organization, but up to the present they have been futile, and I think I am safe in saying they will continue to be so.

I see that an attempt is being made in Ontario to undermine the farmers' movement in that province. To the cooperating farmers I would say that you are now in a position that we have frequently been in, a position in which you can show that you are not to be blinded by a vision that can be a penny close to your eyes. Stick to the organization which you have developed. Blindness to their ultimate

interests has cost the farmers uncounted millions. It is just such occasions as these that show how much we have benefited by our mistakes and failures as co-operators in the past.—J. A. Duggan, Sask.

#### Hogs on Pasture

**D**URING the past season, experiments were carried on at the Minnesota Experimental Station with the object of showing how the most economical gains could be made by hogs running on pasture, and receiving a grain ration. Shelled corn was the grain fed in all the experiments, except one, in which barley was given. The corn was supplemented with tankage in some cases, and with buttermilk in others. The highest gain an acre for pasture was secured from hogs running on alfalfa, and being self fed on corn, the gain an acre being \$168.09. This does not take account of labor, risk or overhead charges. The rations given were as follows:

1. Three per cent. of live weight in shelled corn, with alfalfa pasture.
2. Four per cent. of live weight in shelled corn with alfalfa pasture.
3. Shelled corn, self-fed, with alfalfa pasture.
4. Four per cent. of live weight in shelled corn with two pounds of buttermilk, per pig daily, and alfalfa pasture.
5. Four per cent. of shelled corn with very little tankage ration and alfalfa pasture.
6. Three per cent. of ground barley with rape pasture.
7. Three per cent. of shelled corn with rape pasture.
8. Four per cent. of shelled corn with rape pasture.
9. Shelled corn, self-fed, with rape pasture.
10. Shelled corn, self-fed, tankage and rape pasture.

The results of feeding these various rations including cost, profit per acre, and profit per pig, appear in the following table:

Rations	Feed cost of 100 per acre	Profit per pig	Profit per acre
1.....	\$5.922	\$105.85	\$2,592
2.....	\$5.885	157.44	4,320
3.....	6.203	168.09	4,387
4.....	5.981	144.21	.....
5.....	6.010	99.80	2,164
6.....	6.156	81.73	2,090
7.....	5.786	77.164	2,413
8.....	5.177	133.84	4,328
9.....	5.534	109.60	3,425
10.....	5.638	165.52	.....

The profits shown by ration 7 and 8 were reduced because one pig in each lot proved to be unthrifty and had to be removed.

#### Judging Contest at the National

**O**NE of the main features at the National Dairy Show from an educational point of view is the Dairy Cattle Contest in Judging. This year at Springfield, Mo., the contest in judging attracted more interest than usual was shown by onlookers watching the competing teams representing eighteen States Agricultural Colleges, from as far west as South Dakota and as far south as North Carolina. Each company saved may be a dollar thrown away. Some insidious attempts have been made to destroy our organization, but up to the present they have been futile, and I think I am safe in saying they will continue to be so.

The contest was superintended by officials from the Dairy Division of the United States Department of Agriculture at Washington. Mr. H. H. Hawes, of Rhode Island State College, was the highest honor in the judging of all breeds of cattle in the contest. With this honor Mr. Hawes has the additional distinction of winning the gold medal donated by the National Dairy Show Association, and a four hundred dollar scholarship given by the De Laval Separator Co.

**Short Courses in Stock Judging**

In compliance with the requests of county boards of agriculture, the following short courses in stock judging have been arranged by the Institutes Branch of the Ontario Department of Agriculture:

County and Place	Date
Welland: Stamford	Nov. 27, 28
Allanburg	Nov. 29, 30
Brant: Howell's School	Dec. 11
Oakland	Dec. 12, 13
S. Essex: Leamington	Dec. 14, 15
Oxford: Embro	Dec. 15, 16
Brant: White's School	Dec. 20, 21
Moyle	Dec. 22
W. Huron: Bluevale	Nov. 28, 21
Dungannon	Nov. 29, 23
S. Huron: Exeter	Nov. 23, 24
W. Huron: Londeborough	Nov. 27, 28
E. Middlesex: Thorndale	Dec. 11
S. Essex: Harrow	Dec. 12, 13
E. Middlesex: Hilderton	Dec. 14
Harrietsville	Dec. 15
W. Middlesex: M. Brydges	Dec. 18, 19
Wardville	Dec. 20, 21
N. Ontario: Sunderland	Nov. 23, 24
W. Victoria: Woodville	Dec. 11, 12
Valentia	Dec. 13, 14
S. Ontario: Claremont	Dec. 14, 15
East side of riding	Dec. 18, 19
E. Victoria: Omemece	Dec. 19, 20
Fenelon Falls	Dec. 21, 22
Russell: Cumberland	Nov. 20, 21
Bassell	Nov. 22, 23
Stormont: Monkland	Nov. 23, 24
Dundas: Farran's Pt.	Nov. 27, 28
Stormont: Harrison's Cor.	Nov. 28, 29
Dundas: Dixon's Cor.	Nov. 30
Dec. 1	
Winchester	Dec. 4, 5
Stormont: Finch	Dec. 6, 7
Frontenac: Wolfe Island	Dec. 7, 8
Lennox & Addington	
Newburgh	Dec. 11, 12
Enterprise	Dec. 13, 14
Centre Frontenac: Mountain Grove	Dec. 15
N. Leeds & Grenville:	
Bishop's Mills	Dec. 18, 19
W. Durham: Blackstock	Nov. 28
Sollina	Nov. 29
S. Lanark: Perth	Nov. 30
Dec. 1	
Glenagarry: Glen Norman	Dec. 4, 5
S. Renfrew: Douglas	Dec. 8, 9
Armstrong	Dec. 8, 9
S. Lanark: Lombardy	Dec. 11, 12
E. Peterboro: Norwood	Dec. 12, 13
W. Peterboro: Bridge-north	Dec. 14, 15
E. Northumberland:	
Campbellford	Dec. 18, 19
E. Durham: North of Manners	Dec. 20, 21
Dufferin: Geo. Gier's Farm, Grand Valley	Nov. 21

**Making the Barn Attractive**

By Caroline French Benton.

WHAT is the first thing one notices in looking over a farm? The barn, of course, since that is larger than the house. And it is this very barn, with its belongings, which makes the place so hideous that young people who are starting out in life hate their farm homes. So it is here that one must begin to alter things and make them more attractive.

Sometimes one sees an old farm which has a neat white house with a long row of outbuildings stretching back from it, ending in a white painted barn. There is the ideal farm home. Unfortunately, such few places are rare indeed, taking the country over.

The barn has been built on a scale too large for the old-fashioned way of managing, and built entirely for service, not at all for appearance. The real snag of the case is too often like this: The barn stands near the house, sometimes directly across the road from it, so that the view from the house windows is into its yawning front door; sometimes at one side of the house, so near that it is impossible to escape from its odors. The doors sag, the sides are unpainted, a

pile of manure lies conspicuously, at one side are outbuildings, many of them useless, old carriage-houses, hen-roosts, wood-houses and the like, and too frequently a pig-sty. At the other side are a number of tumble-down sleighs without wheels and without axles, and besides them are farm utensils, broken and rusted and worthless. Is it any wonder that those who must daily look on a "view" like this decide on leaving the home?

Often, however, a model farm exists, with large, stately buildings in good repair, and barns painted and kept up perfectly and a house that looks like home, but for one such there are many of the old sort. Of course, once in a while it will be found possible to move the farmhouse away from the barn if the latter must stand where it is. Sometimes there is a little knoll adjacent where it is not so costly matter to put it, to its vast improvement. Where this cannot be done, but the two must stand in close proximity, at least the barn may be put in perfect order. The sagging doors may be mended, the manure piles carted away, the pig banished to a distance and the henrosts hidden. The

best and prepare the rest for market.

**Britain Has Solved The Rubber Riddle**

Rubbers and Overshoes Are Cheap as Ever Today, While Other Necessities, Particularly Shoes, Have Nearly Doubled in Price.

Rubber has been one of the most insistent and intensely interesting problems of the twentieth century—and its solution is proving of vital importance to the Empire in this great war.

Until 1910 the world depended for its crude rubber on the forests of South and Central America and Africa. The supply increased slowly, if at all, while consumption, since the advent of the motor car, has grown enormously. From an average of \$1,000 a pound in 1908, the price jumped to \$3.00 in 1910. Manufacturers of rubber kept pace—no doubt you remember what rubbers cost for a year or two—and the situation looked alarming.

The search for synthetic rubber was redoubled in vigor. German chemists had been working on it, and the world seemed to expect them to come through with some ingenious process for manufacturing rubber from its known ingredients, on a commercial scale and at a low cost. But the world still waits—and so does the Kaiser, judging from his indignation over Britain's refusal to let him import rubber by registered mail.

Relief from a rubber famine came instead from the far-sighted development policy of Britain's Empire builders, who for years, in spite of general ridicule, had been encouraging the growth of plantation rubber on a large scale in Ceylon, Sumatra, Java and the Malay States. Money was advanced to planters to carry them through the seven-year period before the trees started to produce, and hundreds of thousands of acres were planted.

By 1910, when the pinch came, British plantations produced 8,200 tons—11% of the world's output. The next year saw 14,000 tons of plantation rubber—nearly 20%. In 1912 it had grown to 29%—in 1913 to 44%—in 1914 to 59%—last year to 68%—or 107,867 tons. This year's production is estimated at 150,000 tons, or 75% of the world's supply.

With three-quarters of the rubber production thus controlled by Great Britain, and the seas in the grip of her mighty fleet, the Allies are assured of an abundant supply far war purposes, while the Teutons' troubles from lack of it are growing daily more serious.

Having a practical monopoly of the supply, and the power to impose such prices as she chose, Great Britain has made it, except to her enemies, a benevolent monopoly, and has set the price of crude rubber lower than it was before the war.

To Canadians this is doubly important, because the climate makes rubber footwear a necessity. Now, when shoe prices are soaring, while rubbers and overshoes are as cheap as ever, it is clearly economy to protect expensive leather footwear with rubber, and to wear rubber farm boots instead of those made of leather. Besides the big money saving, there is the valuable protection to health. Wet feet and colds go hand in hand, with a ghastly train of ills—easily avoided by wearing rubbers.

Then there is the patriotic side. Vast quantities of leather are absolutely necessary for the army, and the scarcity is growing. Every pair of shoes we save helps to ease the situation, and so serves the Empire to which we owe this welcome cheapness of rubbers.

**Save your Shoes and Serve the Empire!**



In Union There is Strength

An Assistant for Mr. Gurney

THE appointment is announced of Mr. L. H. Blatchford, of Embro, secretary of the Embro Farmers' Club, as assistant to Manager E. C. Gurney, of the United Farmers' Cooperative Company, Toronto. The immense volume of business now being done through the central company has necessitated such an appointment. In fact the staff at Toronto has been overmanned for months and its members of the same kind will have to be made if the work is to be handled with the despatch and efficiency that is required.

Mr. Blatchford has made a great success of his work as secretary of the Embro Farmers' Club. His appointment has been made with the approval of the full board of directors. It will probably result in more lines of work being undertaken by the central company than have been hitherto and thus still further extend its usefulness. As announced recently the sales of the company in three months have amounted to over \$160,000. This gives some idea of how rapidly the business is growing. Mr. Blatchford's experience as a successful secretary of a local farmers' club, and as a delegate to the central convention, will prove great value to him in his new position. He is a young man and should grow with the movement and his usefulness increase as time goes by.

Relief Still Coming In

THE Autville farmers' club is one of the latest to make a contribution towards the relief of the fire sufferers in northern Ontario. This club at a recent meeting voted \$10 to which the secretary, Mr. E. A. VanAllen, added \$2, making \$12 in all to help out in the north. This money has been forwarded by Farm and Dairy to Mr. J. J. Morrison, who, being able to purchase at wholesale prices, is in a position to use these contributions to the best possible advantage.

Farm and Dairy this week received letters from three of the farmers whose homes were destroyed during the fire, expressing their thanks for the assistance that has been given them. All of them had received donations of flour.

Frozen Wheat.

THERE is a possibility that there will be a considerable percentage of frozen wheat in western Canada this fall. At a recent meeting of the directors of the United Farmers' Company, held in Toronto, Mr. T. A. Greer, President of the Grain Growers' Grain Company, of Winnipeg, who was present, reported that at the time of the meeting fully 65 per cent. of the western grain was still in the stack, and there was a probability that a considerable percentage of the western wheat might be frozen this fall. Shortage of labor was adding to the difficulties of the situation.

Should frosts damage the wheat some of this wheat may be available for Ontario farmers at prices which will make it a profitable feed. In such an event the United Farmers' Company will do what it can to open up a line of trade in this wheat.

F.O. in Ontario County

VERY interesting and productive meeting of the farmers near the town of Uzbridge, in Ontario Co., Ont., was held on Nov. 19th. Nearly 75 busy men gathered

at a local school house to listen to Mr. J. J. Morrison, secretary of the U.F.O., and to consider the advisability of organizing a farmers' club. The interest shown was very great and a club with over 50 members was organized. Shares were taken in the United Farmers' Company. The plan is to hold at least one meeting a month and to start buying and selling cooperatively at once. One more group of farmers who have felt dissatisfied with existing conditions and shown that they were willing to get together for the benefit of all.

Light on the Origin of the Barn Fires

ON another page of this issue we have called attention to the mysterious barn fires that have occurred in Western Ontario. At the time of going to press, word has been received of an investigation conducted by Mr. A. H. Dickie, of the Fire Marshal's Department, Toronto, in connection with the fire which destroyed the barn of Mr. Bert Naneckivell, of Dereham Township. Mr. Dickie's verdict was that the fire was caused by spontaneous combustion in feed contained in bags and consisting of oat dust and oat bran, which had been placed in the barn only a few days before. This, it is stated, is very dangerous material to have in a building, unless it is spread out, and other farmers in the district report that they detected it heating in their barns.

So great is the anxiety on account of so many barn fires, that many of the farmers of Oxford county are regularly patrolling their property at night with loaded guns.

An Optimist

OLE Uncle Finn was a good old chap.

But he never seemed to care a

—rap.

If the sun forgot

To rise some day,

Just like as not

Ole Finn would say:

"'Ocmonn dark, this here we're in,

but 'taint so bad as it might 'a' been."

But a big cyclone came 'long one

day,

'n' the town was wrecked and blow-

ed away.

When the storm had passed

And he stood around

Thought at last the

Ole Finn had found

The state o' things he was buried in

About as bad as it could 'a' been.

So we dug 'im out o' the wretched

And lifted

He was rafter off his neck.

He was brused at cut,

And a sight to see;

He was ruined, but

He says, says he,

With a weak look 'round and a

smashed up grin hear

"'Taint 'so bad as it might 'a' been!"

But after all, it's the likes o' Finn

Makee this world fit fer livin' in.

When days are drear

And skies are dark,

It's too to hear

Some ole cuss bark,

"Now see here son," with a cheerful

grin.

"'Taint 'so bad as it might 'a'

been!"

—Adapted.

Good breeding must be supplement-

ed by good feeding. Otherwise the

breeding herd will degenerate rapidly.



The Future Prosperity of the Farmers of Ontario

Lies in Mutual Respect, Mutual Confidence AND CO-OPERATION

Our new price list of Groceries is now ready. Before buying your Xmas groceries get a copy of it. It is free for the asking and will save you dollars on your Xmas buying.

We are negotiating for next year's supply of Binder Twine. If you want to profit by our ability to buy at closest prices, advise us early how much you require. Remember we stand between you and high prices.

There is an advance on coal oil of 1/2c. Steel drums for oil can be supplied. Corn and oats are declining.

The United Farmers' Co-Operative Co. LIMITED

"THE ONTARIO FARMERS' OWN ORGANIZATION" 110 Church Street Toronto, Ont.

Sunshine and Shadow

Born? With the advent of each "little stranger" happiness increases, but so does responsibility. A child has been called "a bundle of possibilities." But these will not be realized if poverty is an unanswerable argument for a Mutual Life Policy—such child is "an accredited agent" of the Mutual.

Married? Every man who assumes the responsibilities of marriage requires simple life insurance protection. The husband will maintain his home in the greatest comfort while he lives. Should the unexpected happen and should he be called away, who will keep that dearest spot on earth? Robert Hubbard said: "Life insurance avoids the necessity of leaving things to the neighbors."

Died? Whenever we hear of the passing of any acquaintance who had helpless dependants, instantly the question arises: Was his family ment for life insurance protection? Every birth, every marriage, every death, advertises the benefits of sound life insurance such as the Mutual issues.

The Mutual Life Assurance Company of Canada Waterloo, Ontario

When You Write---Mention Farm and Dairy



The Upward Look

"The Sunflower"

FOR God, who commanded the light to shine out of darkness, hath shined in our hearts, to give the light of the knowledge of the glory of God in the face of Jesus Christ.—II Cor. 4:6.

I was much interested lately in reading of the badge, the motto, the colors, and the flower of Women's College in India. This is one of the greatest tributes to Christianity, this college for the woman of that land, where for so many years they have been kept in such pitiful ignorance and subjection.

The badge is a lighted household lamp of Indian design, the expressive symbol suggesting that these Christian women must strive to bring the Gospel Light into the hearts and lives of their sisters, who are still in the darkness. Ours is a double privilege and duty, to see that our lamp is burning for our home abroad, as well as those far away, foreign ones, made dear by the link of Christ-like sympathy.

Their motto: "Lighted to lighten," is a grand reminder of the great burden of responsibility, assumed by every Christian. If we shrink or shift this burden, we are not true followers of our Master.

Whatever our Christianity means for us we must ask Christ to make it mean through the working of His spirit in us, to others. As no one can ever give more of this spirit than He possesses, it is a solemn and sacred obligation and we must so yield our lives to Him that we may be enabled to increase in love and faith and Christian knowledge. In this way we will have more of Him to give to others.

The college colors are the green of the winter's insurance; the brown of the dry sun baked soil; the gold of the pure flame of the emblem. Their chosen flower is the sunflower, combining all three colors. It is found in India and Britain and America, expressive of the gratitude that India feels to the other countries for sending her the Gospel. But what it meant most to them was that as that flower always turns its face to the sun, so must Christians ever and always turn to Him for light and strength and inspiration.—I. H. N.

Amusements

Conducted by MARION DALLAS

Fun for Old and Young

AS autumn glides into winter, the lengthened shadows bring us shorter days and long frosty evenings, when the cheerful fire-side has a kindly warmth. People who are given to hospitality are thinking of inviting their neighbors in to spend the evening. Immediately the need arises of some form of amusement, fitted for all capacities—something, in which the old may combine with the young, the weak with the strong.

Game of Canadian History. A game called "History" is one in which young and old can take part. Any number of persons may play. Having seated themselves around a large table or with books in the lap on which to place the paper when writing, they take the letter "A" and write in five minutes all the names of men prominent in Canadian history that they can remember beginning with the letter. One person who acts as leader and judge gives notice when the time is up and the player having the largest list of names has the number first put to his credit. Every name a person mis-spells takes one from

**MAGIC BAKING POWDER**

no more than the ordinary kinds. For economy, buy the one pound tins.

MADE IN CANADA

E.W. GILLETTE COMPANY LIMITED

"I earn \$2 a day at home"

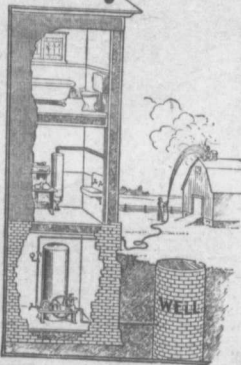
You may say that, too—if you want more income. Easy to learn. Steady work at home the year round. Write for particulars. Knitter Hosiery Co., Ltd. Dept. 301 P. 357 College St., Toronto

**BULBS 25c.**

50 High Grade Flowering Bulbs, Gladiolus, Begonia, Primula, etc.

Other kinds, Asparagus Fern, All Pot plants, Good Old Homestead Nursery, Round Pond, Me.

Empire WATER SUPPLY System



EVERY MODERN CONVENIENCE IN THE FARM HOME RUNNING WATER FOR EVERY FARM NEED

Why not provide your farm home with just as good conveniences as any city house? It can be easily done at a most moderate cost and it will not only provide greater comfort for your family and lighten burdens, but will increase the value of your property as well. Just think of a strictly modern bathroom with all fittings—running hot and cold water in the kitchen and other parts of the house, in the barn and outbuildings. Do away with the old, unhealthy, inconvenient outdoor cesspool and water-lugging methods.

SEND FOR FREE BOOKLET TO-DAY

describing the Empire System. Write us your requirements and we will send you full particulars and the cost of a system adapted to your particular needs. Outfit includes bathroom fittings, kitchen sink and hot water boiler for range, Pneumatic Pressure plant and all piping complete. Prices \$225 or more for extra fittings. NOW is a good time to find out about it. Let us send you a free estimate.

EMPIRE MFG. CO., Limited, East London, Ont

To Investors

THOSE WHO, FROM TIME TO TIME, HAVE FUNDS REQUIRING INVESTMENT, MAY PURCHASE AT PAR

DOMINION OF CANADA DEBENTURE STOCK

IN SUMS OF \$500 OR ANY MULTIPLE THEREOF.

Principal repayable 1st October, 1919.

Interest payable half-yearly, 1st April and 1st October by cheque (free of exchange at any chartered Bank in Canada) at the rate of five per cent per annum from the date of purchase.

Holders of this stock will have the privilege of surrendering at par and accrued interest, as the equivalent of cash, in payment of any allotment made under any future war loan issue in Canada other than an issue of Treasury Bills or other like short date security.

Proceeds of this stock are for war purposes only. A commission of one-quarter of one per cent will be allowed to recognized bond and stock brokers on allotments made in respect of applications for this stock which bear their stamp.

For application forms apply to the Deputy Minister of Finance, Ottawa.

DEPARTMENT OF FINANCE, OTTAWA, OCTOBER 7th, 1916.

IT PAYS YOU to mention Farm and Dairy when writing advertisers





Difference Between Economy and Thrift

"To be able to manage one's resources so that they yield the best results, is Thrift," explains Everywoman's World in an article in its October issue. Under the head "My Greatest Experience With Thrift," a series of letters from readers are published—readers in all sections of the Dominion with miscellaneous resources, aims and objects.

In an introduction of these the article continues: "Thrift and Econ-

omy are not the same. Economy is a disposition to save or spare, and freedom from extravagance or waste. Economy is a negative virtue. It enjoins us not to spend, not to be extravagant, nor wasteful. Thrift is more than that. It is positive, and is care and prudence in the management of one's resources," and "Thrift is the best means of thriving."

"Our resources are money, time, strength, ability and all those other things, both tangible and intangible, which go to the making of the full stature of man and his life.

"A thrifty nation is a wealthy nation, wealthy in brain, brawn, and in

the handling and development of all its resources, both human and natural."

Of the several letters from Canadian citizens on this subject, one brief epistle, brought right home, will be sufficient as an example of what others have done in the practice of thrift:

"I wanted hardwood floors downstairs, and not being able to buy them, I set about to improve the old ones. This I succeeded so well in doing, that my friends think I did lay down new floors.

"I made a thick flour paste—very

thick—and filled it up with old newspapers torn into little bits, until it became a pulp, no paste being seen. Then I set the young people working with case knives. They filled in all the cracks and knot holes with the pulp, which dried as hard as flint. It took the stain as well as the wood.

Now I have a lovely smooth floor, over which I have thrown a rug made from my worn out carpet.—Mrs. R. L. S."

The Canadian Government is going to no end of pains to inaugurate a thorough Thrift campaign, and such an insight into the experiences of Canadian homekeepers, as that above, is bound to have wide-spread effect.



When you want to save cooking a big meal — serve Pancakes. When the appetite balks at meat, and fish becomes distasteful — serve Pancakes, — or Griddle Cakes — or Waffles. But when you seek real nutrition in pancakes, dainty aroma and flavor, palatable richness and easy digestion — then, serve FIVE ROSES pancakes and griddle cakes. Not only does FIVE ROSES flour bring the wonderful food value so plentifully stored in Manitoba's finest wheat but it

Makes Pancakes Delightful and Digestible

Fried on pan or baked on griddle, no cake can ever disturb the most delicate stomach, if made from a FIVE ROSES batter.

Simply because FIVE ROSES is such a sturdy and glutinous flour that it resists the absorption of fat, merely taking enough to brown becomingly with a golden contrast, to crisp with crinkly, curly edges. Serve pancakes oftener, since FIVE ROSES renders them so palatable, nutritious, economical. And when you become intimate with its wonderful quality and versatility, you will eagerly use FIVE ROSES for all your baking.

LAKE OF THE WOOD MILLING CO., LIMITED, MONTREAL.

TO SERVE A VARIETY OF PANCAKES The famous FIVE ROSES Cook Book gives 10 tested recipes and full directions. Also over 200 infallible cake recipes, and fully 50 directions and hints on bread-making. So indispensable to good home-kitchen that already over 200,000 women couldn't do without it. To get a copy see next opposite.

TO MAKE GRIDDLE CAKES and WAFFLES A full chapter on these delectable cakes in the FIVE ROSES Cook Book. Together with notes and details on biscuits, fried cakes, rolls, buns, cookies, biscuits, etc. Do you want a copy of this popular 164-page smoking FIVE ROSES Cook Book. Mailed on receipt of 10 two-cent stamps. Address Dept. K.



WHEN YOU THINK OF PANCAKES—THINK OF FIVE ROSES.

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## Instructions To Do the Testing

**New Dairy Act to Operate Without Cost to Patrons**  
 The Editor Farm and Dairy:  
 Hon. J. S. Duff, Minister of Agriculture for Ontario, has sent instructions to Mr. G. G. Publow, Chief Dairy Inspector for Eastern Ontario, and Mr. Frank Harris, Chief Dairy Inspector for Western Ontario, concerning the method of making tests under the new Dairy Standards Act. In his letter announcing that the testing will be done by the Department's instructors and therefore without cost to the patrons or cheese factories, he says:

Toronto, November 16, 1916.

Dear Sir:

I beg to advise you that the question of the testing under the new Dairy Standards Act has received further consideration, and I have come to the conclusion that for the first year or two at least it should be done by the Dairy Instructors of the Department. I believe that this is in accord with your own judgment as well as that of others who have given the matter much thought and attention during the past few months. It seems to me that in inaugurating a change of this nature every effort should be put forth by all the parties interested to make it operate as smoothly and successfully as possible, and I feel that if the testing is done by the instructors in the employ of the Government it will be done at a minimum of expense and will give confidence to the patrons. It will be expected that the factories will provide the equipment, including the Babcock test, and do the incidental work which may be necessary aside from the actual testing itself. This will involve a rearrangement of the work of the instructors, but these details will be worked out later on.

I believe that arrangements are now being made to hold the annual district and local meetings in connection with the cheese factories, and it seems to me desirable that the whole subject should be fully discussed. I trust you will arrange to be present at as many as possible or have some of your staff present in order that any information which may be needed may be given. The Department is anxious that there should be a full and free discussion, for which we feel that the adoption of a plan by which payment will be made on the basis of quality is in the best interests of the industry as a whole, we also realize that it can only be made successful with the hearty cooperation of both patrons and cheese factory operators.

The tests which you have made during the past summer showing the different amounts of cheese made from 100 lbs. of milk of varying fat and casein content constitute a very strong demonstration of the value of the system under the Dairy Standards Act and seeks to inaugurate in making their returns to those engaged in the dairy business commensurate with the thought and labor they put into producing quality goods. Trusting this plan will work out for the successful operation of the Act, I am,

Yours very truly,

J. S. DUFF, ESQ.,  
 Minister of Agriculture for Ontario.

### Margarine a Trouble Breeder

**WHEN** all the trouble which the sale of margarine injects into the dairy industry is taken into consideration—trouble which must be paid for in the form of salaries to inspectors, costs of litigation, fees to lawyers for drafting legislation and interpreting it and in a thousand other ways—it is doubtful if the use of margarine is really a saving to the people at large. Canada has avoided this trouble by simply passing a law that butter substitute shall not be manufactured and imported, and until recently this was found to

be satisfactory. The high prices for butter, however, have caused a great outcry against restrictions which have been placed on margarine, and in many quarters there is a demand that it be allowed a place on our market. This demand, however, should be accompanied by at least some recognition of the trouble which is sure to ensue from the use of butter substitutes.

The trouble that the sale of margarine engenders is indicated in the legislation which it has been found necessary to enact in Missouri regarding it. A mere summary of this legislation would cover a page of Farm and Dairy. We give herewith a list of the headings of sections of the legislation in order that it may be seen how multitudinous are the devices invented by margarine dealers to palm off butter substitutes upon the consumer under the name of butter and at butter prices. The legislation in that State covers such points as: imitation butter defined; coloring of containing imitation butter to be marked; how imitation butter to be shipped under its true name; not to mix oleomargarine with butter, renovated butter to be branded; possession of substitute for butter, presuming to offer imitation butter for sale; penalties for violation of law; prima facie evidence; mark a misdemeanor; State Board of Agriculture to enforce article; selling oleomargarine labelled; oleomargarine unlabelled.

From the number of ways which this list indicates as having been invented by vendors of margarine to palm off their products of the factory as the reality, it is readily seen that an amount of trouble people are inviting when demanding that the restrictions on margarine be prohibited. As a trouble breeder margarine can win the honors at a canter every time.

### Death of Hon. J. S. Duff

**JUST** as we are going to press news has been received of the sudden death from heart failure of the Hon. J. S. Duff, Minister of Agriculture at the home of a friend in Alliston on Nov. 17.

The news of the death of his son, Pte. G. Clark Duff, who went overseas with the 76th Battalion, came a fortnight ago on the day following his return to his duties as Minister of Agriculture after a lengthy vacation made necessary through ill-health.

#### Long Public Career.

"Jimmie" Duff for so he was known by thousands of friends, who were never awed by any Ministerial dignity—was a child of Ontario, and was born in Orange Ontario, and was on the farm at Cookstown, on which he lived all his days. His father came to Cookstown in 1825 from the north of Ireland, and James S. Duff was born in 1856. He was educated at the local public school and the Collingwood Collegiate Institute. He was elected a Councillor for the township of Essa in 1888, and afterwards became Deputy Reeve. He was a member of Legislature for 18 years and Minister of Agriculture for 8 years.

He was liked by everybody of the kind who make hosts of friends and keep them. Though his department had to withstand its share of political fire, he was personally esteemed by everybody in the Legislature.

**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.

"Bastlake" Galvanized shingles, coupled with "Haltins" Ventilators and "Acheson" Hood Lights make a perfect roof. "Metallic" buildings defy the elements. "Easton" rods last over thirty years ago are good today.

"Metallic built" means fireproof, stormproof, neat and durable construction.

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

**Metallic Roofing Co., Limited**  
 Toronto and Winnipeg

THE GREAT COAL TAR DISINFECTANT

## ZENOLEUM

**ZENOLEUM**—the powerful Coal-Tar disinfectant—is hard to handle and is not greasy or inflammable. It kills lice, mites, fleas and worms. It not only PREVENTS disease, but is a recognized cure. Try it according to directions for disease of live stock and poultry. Your Farms, Stables and Poultry Houses clean and sanitary by liberal use of diluted Zenoleum. If you want healthy birds and animals, free from lice, mites, ticks and fleas, use Zenoleum—only one-cent the cost of coal oil, and twenty times as cheap as carbolic acid, and three times as effective. Ask your dealer or send to us.

**ZENNER DISINFECTANT CO., Sandwich St., Windsor, Ont.**

## CREAM PRODUCTION AND THRIFT

Consists in producing all the cream you can and shipping it to Belleville Creamery. We furnish Cans and pay Express. We never before paid such prices for cream. We are the most up-to-the-minute Creamery in Eastern Ontario.

WRITE US.

**BELLEVILLE CREAMERY, Limited**  
 118 FRONT STREET - BELLEVILLE



**Goes Like Sixty  
 Sells Like Sixty \$65  
 Sells for Sixty-five**

The greatest engine value ever offered—our new 2 1/2 h.p. engine—ready to go to work on your farm for only \$65.00. No farmer in Canada to-day can afford to be without this engine. It is absolutely guaranteed for FIVE years. Write us for our free trial and demonstrating offer on any size for the first one in each neighborhood.

**GILSON MFG. CO., Ltd., 247 York St., Guelph, Ont.**



HOLSTEIN-FRIESIAN NEWS

Farm and Dairy is the leading exponent of dairymen in Canada. The great majority of the members of the Canadian Holstein-Friesian Association are readers of the paper. Members of the Association are invited to send us their interest to Holstein breeders for publication in this column.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS FROM SEPT. 1 TO OCT. 31

Mature Cows. 1. Madam Ponce Pauline, 1929, 3y. 5m. 8d.; 836.6 lbs. milk, 27.42 lbs. fat, 34.28 lbs. butter.

30-day record: 3y. 5m. 2d.; 2384.8 lbs. milk, 109.20 lbs. fat, 136.50 lbs. butter. 60-day record: 3y. 5m. 24d.; 6490.6 lbs. milk, 209.88 lbs. fat, 263.98 lbs. butter.

Colony Farm, Essexdale, B. C. 2. Drobegga 2nd, 1217, 3y. 7m. 16d.; 766.5 lbs. milk, 32.12 lbs. fat, 37.48 lbs. butter.

30-day record: 3y. 7m. 14d.; 2777.8 lbs. milk, 84.92 lbs. fat, 106.46 lbs. butter. 60-day record: 3y. 7m. 14d.; 5562.8 lbs. milk, 168.82 lbs. fat, 208.98 lbs. butter.

3. Uraganah-Sue Suga, 1941, 3y. 6m. 1d.; 638.6 lbs. milk, 29.10 lbs. fat, 37.12 lbs. butter. 30-day record: 3y. 6m. 1d.; 2509.6 lbs. milk, 83.13 lbs. fat, 112.42 lbs. butter.

Dr. A. A. Farwell, Oshawa. 4. Lakodie Mable Alena DuCal, 1483, 3y. 7m. 10d.; 864.4 lbs. milk, 20.38 lbs. fat, 25.18 lbs. butter.

30-day record: 3y. 7m. 10d.; 2316.4 lbs. milk, 82.56 lbs. fat, 102.94 lbs. butter. 60-day record: 3y. 7m. 10d.; 4447.7 lbs. milk, 162.81 lbs. fat, 203.51 lbs. butter.

Colony Farm, 49.4 lbs. milk, 17.89 lbs. fat, 21.73 lbs. butter. 11-day record: 3y. 7m. 15d.; 980.0 lbs. milk, 32.98 lbs. fat, 42.49 lbs. butter.

5. Daisy Fafort, 7735, 10y. 5m. 13d.; 387.9 lbs. milk, 14.81 lbs. fat, 18.62 lbs. butter. A. J. Campin, Unionville.

30-day record: 3y. 6m. 14d.; 2582.2 lbs. milk, 86.32 lbs. milk, 109.59 lbs. fat, 21.49 lbs. butter. 60-day record: 3y. 6m. 14d.; 5258.8 lbs. milk, 181.51 lbs. fat, 228.12 lbs. butter.

6. Fayne Pieterie Soga, 21827, 4y. 2m. 24d.; 425.8 lbs. milk, 17.15 lbs. fat, 17.89 lbs. butter. R. M. Holtby.

30-day record: 3y. 7m. 25d.; 1894.0 lbs. milk, 54.90 lbs. fat, 72.74 lbs. butter. 60-day record: 3y. 7m. 25d.; 3517.1 lbs. milk, 116.73 lbs. fat, 145.67 lbs. butter.

7. Het Loo Mantel, 26282, 2y. 6m. 14d.; 477.8 lbs. milk, 14.20 lbs. fat, 17.75 lbs. butter. 30-day record: 3y. 6m. 14d.; 1882.6 lbs. milk, 54.46 lbs. fat, 70.97 lbs. butter.

8. Victoria Isabella Burke, 30763, 3y. 1m. 30d.; 293.8 lbs. milk, 8.15 lbs. fat, 19.19 lbs. butter. Ernest C. Chapman.

9. Daisy Fafort, 7735, 10y. 5m. 13d.; 387.9 lbs. milk, 14.81 lbs. fat, 18.62 lbs. butter. A. J. Campin, Unionville.

10. Daisy Fafort, 7735, 10y. 5m. 13d.; 387.9 lbs. milk, 14.81 lbs. fat, 18.62 lbs. butter. A. J. Campin, Unionville.

11. Daisy Fafort, 7735, 10y. 5m. 13d.; 387.9 lbs. milk, 14.81 lbs. fat, 18.62 lbs. butter. A. J. Campin, Unionville.

12. Daisy Fafort, 7735, 10y. 5m. 13d.; 387.9 lbs. milk, 14.81 lbs. fat, 18.62 lbs. butter. A. J. Campin, Unionville.

13. Daisy Fafort, 7735, 10y. 5m. 13d.; 387.9 lbs. milk, 14.81 lbs. fat, 18.62 lbs. butter. A. J. Campin, Unionville.

14. Daisy Fafort, 7735, 10y. 5m. 13d.; 387.9 lbs. milk, 14.81 lbs. fat, 18.62 lbs. butter. A. J. Campin, Unionville.

15. Daisy Fafort, 7735, 10y. 5m. 13d.; 387.9 lbs. milk, 14.81 lbs. fat, 18.62 lbs. butter. A. J. Campin, Unionville.

4. Canaan Beauty 2nd, 2117, 30-day record: 3y. 6m. 24d.; 1345.5 lbs. milk, 42.32 lbs. fat, 51.95 lbs. fat, 240-day record: 3y. 6m. 24d.; 464.4 lbs. fat, 580.55 lbs. butter. Dir. Expor. Farms, Ottawa.

5. J. Three Year Class. 1. May Echo Posch, 26974, 210-day record: 3y. 6m. 24d.; 1993.2 lbs. milk, 478.96 lbs. fat, 593.70 lbs. butter. 240-day record: 3y. 6m. 24d.; 17024.2 lbs. milk, 543.96 lbs. fat, 679.50 lbs. butter. Dir. Expor. Farms, Ottawa.

6. J. Two Year Class. 1. Sylvia Soga Posch, 25560, 2y. 11m. 12d.; 573.1 lbs. milk, 17.73 lbs. fat, 22.10 lbs. butter. E. B. Lurtel, Bloomfield.

2. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 3. Donald Raymond, Montreal, Que. 24d.; 349.5 lbs. milk, 13.42 lbs. fat, 15.28 lbs. butter. Earl Kenney, Villa Nova.

4. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 5. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 6. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

7. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 8. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 9. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

10. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 11. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 12. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

13. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 14. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 15. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

16. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 17. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 18. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

19. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 20. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 21. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

22. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 23. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 24. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

25. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 26. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 27. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

28. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 29. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 30. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

31. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 32. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 33. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

34. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 35. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 36. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

37. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 38. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 39. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

40. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 41. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 42. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

43. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 44. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter. 45. Het Loo DuCal, 22094, 2y. 9m. 14d.; 470.9 lbs. milk, 16.57 lbs. fat, 21.94 lbs. butter.

Schulling Posch Westwood, 20805, 4y. 11d.; 1778 lbs. milk, 37.1 lbs. fat, 43.75 lbs. butter. Elsworth Posch, Burford. 3y. 11d.; 1810 lbs. milk, 41.25 lbs. butter. P. Russell.

3. Three Year Class. 1. Molly Rose Rattler, 28523, 3y. 27d.; 1875 lbs. milk, 49 lbs. fat, 600 lbs. butter. O. A. C. 2. Mercene of Springfield, 28524, 3y. 24d.; 1836 lbs. milk, 51.8 lbs. fat, 641.8 lbs. butter. 3. Perrina Fafort, 28525, 3y. 24d.; 1836 lbs. milk, 51.8 lbs. fat, 641.8 lbs. butter. Mich. A. Arbogast, Sebringville.

4. Pontiac Netherland Queen, 1918, 3y. 30d.; 1901 lbs. milk, 51 lbs. fat, 526.25 lbs. butter. Roy Nevill, 310, 747, 415. 5. Princess Calmity Netherland, 1917, 3y. 34d.; 1046 lbs. milk, 30 lbs. fat, 345 lbs. butter. Roy Nevill, 310, 747, 415. 6. Marcella Netherland DeKof, 17391, 3y. 31d.; 11393 lbs. milk, 243 lbs. fat, 458 lbs. butter. Roy Nevill.

7. Katie DeWald, 25485, 3y. 17d.; 3300 lbs. milk, 329 lbs. fat, 411.25 lbs. butter. S. U. Tinkens, Avonmore. 8. Annie Netherland Mary, 27275, 3y. 23d.; 2475 lbs. milk, 291 lbs. fat, 361 lbs. butter. Roy Nevill. 9. Another 20,000-000. 10. Another 20,000-000.

11. Another 20,000-000. 12. Another 20,000-000. 13. Another 20,000-000. 14. Another 20,000-000. 15. Another 20,000-000.

16. Another 20,000-000. 17. Another 20,000-000. 18. Another 20,000-000. 19. Another 20,000-000. 20. Another 20,000-000.

21. Another 20,000-000. 22. Another 20,000-000. 23. Another 20,000-000. 24. Another 20,000-000. 25. Another 20,000-000.

26. Another 20,000-000. 27. Another 20,000-000. 28. Another 20,000-000. 29. Another 20,000-000. 30. Another 20,000-000.

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36. Another 20,000-000. 37. Another 20,000-000. 38. Another 20,000-000. 39. Another 20,000-000. 40. Another 20,000-000.

41. Another 20,000-000. 42. Another 20,000-000. 43. Another 20,000-000. 44. Another 20,000-000. 45. Another 20,000-000.

46. Another 20,000-000. 47. Another 20,000-000. 48. Another 20,000-000. 49. Another 20,000-000. 50. Another 20,000-000.

51. Another 20,000-000. 52. Another 20,000-000. 53. Another 20,000-000. 54. Another 20,000-000. 55. Another 20,000-000.

56. Another 20,000-000. 57. Another 20,000-000. 58. Another 20,000-000. 59. Another 20,000-000. 60. Another 20,000-000.

61. Another 20,000-000. 62. Another 20,000-000. 63. Another 20,000-000. 64. Another 20,000-000. 65. Another 20,000-000.

66. Another 20,000-000. 67. Another 20,000-000. 68. Another 20,000-000. 69. Another 20,000-000. 70. Another 20,000-000.

71. Another 20,000-000. 72. Another 20,000-000. 73. Another 20,000-000. 74. Another 20,000-000. 75. Another 20,000-000.

76. Another 20,000-000. 77. Another 20,000-000. 78. Another 20,000-000. 79. Another 20,000-000. 80. Another 20,000-000.

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For Sale, Cheesey Young Bulls, sired by King Johanna Pontiac Korndyke, a grandson of Pontiac Korndyke, and a brother of Pontiac Lady Korndyke, 3 years old ready for service, one from a 23 lb. grand-daughter of Hanger-void DeKol. Write for full information.

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Six heifers from 12 to 18 months old, bred or guaranteed to get with calf to King Seta Akacira Caramy, the 25 lb. bull, sired by the 450.000 bull. Also three bulls ready for service, one from a 23 lb. grand-daughter of Hanger-void DeKol. Write for full information.

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All ages, male and female. Bulls fit for service by Netherington Lochivar, Imp., 1941, and from good producing and show cows. Yorkshire pigs, five to eight weeks old, seven months to two years old. Yorkshire pigs, five to eight weeks old. Standard bred stallions, 15 months old. Apply to ROBERT SINTON, Manager, Riverside Farm, Monte Belco, Que. or to HON. W. OWENS, Westmont, Que.

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Market Review and Forecast

TORONTO, Nov. 23.—Reports of Canadian trade for the second year of 1916 show that the exports reached a total of over a billion dollars, an increase of \$200,000,000 as compared with the previous year. Imports also increased \$200,000,000, while the excess of exports increased for the year from \$93,000,000 to \$225,000,000. This is considered as gratifying, though it includes the exchange of coin and bullion which might considerably modify this actual balance of trade. Canadians traded and traded with the Yankees, the extent of selling them \$247,984,000 worth of goods and buying from them \$425,488,000 worth. In the fact that this is an increase of the indulgence in luxuries is reflected in that over \$5,000,000 in the total imported during the year. The total amount for this purpose was \$24,177,000, or 10 per cent. of the total imports. The retail trade continued strong, but the price level high with no reductions and some increases reported. Orders are being placed freely though wholesalers are hesitating to guarantee delivery in the future.

WHEAT.—The price of wheat fluctuated considerably during the week, reaching as high as \$2.10, track, bay per bush, No. 3, but the market has been fairly steady since that time. The market is still further advanced. Corn continues to be held at a price of \$1.10, but the market is still further advanced. The price of wheat advanced across the lake, movement of wheat across the lake, shipments for the month of October, 2,580,000; for the same period of 1915, 2,580,000; for the same period of 1914, 2,580,000; for the same period of 1913, 2,580,000. The price of wheat advanced across the lake, movement of wheat across the lake, shipments for the month of October, 2,580,000; for the same period of 1915, 2,580,000; for the same period of 1914, 2,580,000; for the same period of 1913, 2,580,000.

COARSE GRAINS.—Corn grain shows a tendency to follow the fluctuations in wheat prices. The price of corn advanced across the lake, movement of corn across the lake, shipments for the month of October, 2,580,000; for the same period of 1915, 2,580,000; for the same period of 1914, 2,580,000; for the same period of 1913, 2,580,000.

MILK FEEDS.—Car lot, delivered, Montreal freight, 1916, 1915, 1914, 1913, 1912, 1911, 1910, 1909, 1908, 1907, 1906, 1905, 1904, 1903, 1902, 1901, 1900, 1899, 1898, 1897, 1896, 1895, 1894, 1893, 1892, 1891, 1890, 1889, 1888, 1887, 1886, 1885, 1884, 1883, 1882, 1881, 1880, 1879, 1878, 1877, 1876, 1875, 1874, 1873, 1872, 1871, 1870, 1869, 1868, 1867, 1866, 1865, 1864, 1863, 1862, 1861, 1860, 1859, 1858, 1857, 1856, 1855, 1854, 1853, 1852, 1851, 1850, 1849, 1848, 1847, 1846, 1845, 1844, 1843, 1842, 1841, 1840, 1839, 1838, 1837, 1836, 1835, 1834, 1833, 1832, 1831, 1830, 1829, 1828, 1827, 1826, 1825, 1824, 1823, 1822, 1821, 1820, 1819, 1818, 1817, 1816, 1815, 1814, 1813, 1812, 1811, 1810, 1809, 1808, 1807, 1806, 1805, 1804, 1803, 1802, 1801, 1800, 1799, 1798, 1797, 1796, 1795, 1794, 1793, 1792, 1791, 1790, 1789, 1788, 1787, 1786, 1785, 1784, 1783, 1782, 1781, 1780, 1779, 1778, 1777, 1776, 1775, 1774, 1773, 1772, 1771, 1770, 1769, 1768, 1767, 1766, 1765, 1764, 1763, 1762, 1761, 1760, 1759, 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Postal Card Reports

Correspondence Invited.

CAPE BRETON, N.S.

SALMON RIVER, Nov. 13.—Fall plowing is well under way. Frost weather interferes with it. Potatoes are in a bus. Butter is 46c a lb. by the tub. Eggs are hard to get and are up to 28c and 40c a doz.—J. H. McD.

NEW WESTMINSTER DISTRICT, B. C. CHILLWACK, Nov. 7.—Threshing is well on the yield in most places being very good. Potatoes which were planted very early have been harvested in good condition. The turnip crop has suffered so badly during May and June from the "hop" as to now being pitted. Those with silos have started feeding their ensilage. Many auction sales are being held in this locality during the fall months.—N. E. C.

ALBERTA.

LANFANE, Nov. 6.—Threshing is nearly completed here, and although the crop as a whole is not so great as last year's still much wheat is being marketed. Frost and rust took a heavy toll, but even poor grain is selling at a good price. The yield here on the stubble is about 20 bus., and on breaking 40 bus. The summer fallow 40 bus. per acre. The price paid at the elevators on Nov. 4th was \$1.45 for No. 1 hard red winter wheat done by the hour when threshing has finished, the price being \$20.00, with a full crop supplied by the threshermen.—W. M. R.

BRUCE CO., ONT.

PARSELY, Nov. 16.—Owing to the mild weather, fall wheat has made a fair growth, much better than was looked for at this time. Threshing is pretty well done, and is selling at \$1.85 peas, \$2.30; oats and barley are not moving; potatoes are about \$1 a bush; eggs are \$1.25; butter, 46c a lb. The weather is ideal for growing and general farm work.—R. J. N.

FOR SALE AND WANT ADVERTISING

THREE CENTS A WORD, CASH WITH ORDER

FOR SALE—The most modern and up-to-date cheese factory in Oxford County, brick and cement throughout; good milk and first-class location; great around business; easy terms. Apply to Box No. 3, Farm and Dairy, Peterboro.

FOR SALE—Creamery, in good condition in Oxford County, at present doing good business; must be sold to suit our estate. Apply to C. G. Allan, 1424 Queen St. West, Toronto, Ont.

WANTED—Cheese and Butter Makers and Dairymen, to represent us as salesmen during the Fall and Winter months. Mars Nursery Stock is sold during the Winter months than any other time of the year, so we can make it a profitable business for you. Write for particulars. Stons & Wellington, Fishkill Nurseries, Toronto, Ontario.

FARM FOR RENT—220 acres. The most attractive dairy farm proposition in Canada. Situated within easy distance of Brandon; modern brick house, large, chill room. Splendid barn, fitted with Beauty stanchions and water. Complete milking machine, two silos, concrete 140 cu. ft. barn fencod and cross fenced, hog pen, proof cows. Horse; machinery. Milk wholesale in Brandon. Want a tenant who has experience with cows, is a first-class farmer, and has help of his own.—Jas. McGregor, Brandon, Man.

Sales Dates Claimed

The Holstein Breeders of St. Thomas, Ontario, have selected Tuesday, Nov. 28, for their concerted Holsteins. Mr. Fred Carr, St. Thomas, is the Secretary.

At Willowdale, Tuesday, Dec. 5, C. Boeckh will dispose of vats here of 18 head of registered Holsteins. Willowdale is at eight miles north of Toronto. C. Boeckh's consignment stands, Princesse Abbecker Mercena, at 11 Willowdale, Tuesday, Dec. 5. C. Boeckh will dispose of vats here of 18 head of registered Holsteins. Willowdale is at eight miles north of Toronto. C. Boeckh's consignment stands, Princesse Abbecker Mercena, at 11 Willowdale, Tuesday, Dec. 5. C. Boeckh will dispose of vats here of 18 head of registered Holsteins. Willowdale is at eight miles north of Toronto. C. Boeckh's consignment stands, Princesse Abbecker Mercena, at 11 Willowdale, Tuesday, Dec. 5.

R. F. ARMSTRONG'S CONSIGNMENT

THIS consignment sale of R. F. Armstrong, to be held at Tillsonburg, Ont. on Nov. 23, offers exceptional opportunities to the buyer. The following are some of the lots: Lucy M. Staple, a fine 2-year-old, Evergreen Abbecker Teske, whose dam is a grand producer, being sold for \$1,000.00. Evergreen, 2 1/2 yrs., a daughter of Rose, 26 1/2 lbs. Lucy M. Staple is also a "show" given a chance.

Madge of Waterford, and her 2-yr.-old daughter, Molly Middleton, whose dam has a record of 29.55 lbs. butter, 710.9 milk in 7 days. Madge of Waterford is bred to Forest Ridge King May Payne, a son of Fonderne King May Payne, a son fine bull will also be offered for sale. He is a grand individual, and combines several Argie Faye, King Hendrix, who was a daughter of King Segis Segis.

Princesse Abbecker Mercena, a grand daughter of Lulu Kerk, a grand sire, 2 yrs. old, and her last calf (a heifer) sired by a son of Baron Colanthea Payne; Queen Butcher Brookbank, a sister of 7 days, is safe in calf to a son of the great Pontiac Ronydette. These are the first good looking, and fine.

There are also offered a pair of well-bred, sire by Princeess Laddie, and whose Mays Beata De Kol, 24.84 lbs. butter in 7 days, and are bred to Sir Guyva Kol, who has much fine breeding about him.

Cornelia Tensen De Kol is a splendid large cow, will also produce about time of sale, being in calf to Frances Belle Hartog, whose dam has a record of 29.15 lbs. butter in 7 days, and whose sire, Charney Mercedes Pieterle Hartog, has a 2-yr.-old daughter with 24.15 lbs. butter in 7 days.

There are several very good young bulls offered, and fine.

Princesse Abbecker Mercena, an extra inducement to prospective buyers, and each and every animal sold is guaranteed to be as represented.

Write for catalogue to R. F. Armstrong, Tillsonburg.

ELGIN PURE BRED BREEDERS' ASSOCIATION

Don't forget the Sale of 55 CHOICE HOLSTEINS at St. Thomas, Nov. 28th advertised in last week's issue. Write

Frederick Carr, Mgr., or Neil Burton, R.R. 2, PORT STANLEY

HIGHLAND LAKE FARMS

Offer for sale at attractive prices a few choicely bred Holsteins. No. 1—A yearling son of a 34 lbs. bull and a 20 lbs. 3 yr. old prize-winning cow. No. 2—An 8 months son of a 34 lbs. bull and a 15.21 lbs. foundation herd, and will be tested again at next freshening. Write for sire, KING SEGIS PONTIAC CANADA. R. W. E. BURNABY (Farm at Stop 55, Yonge St. Radial) Jefferson, Ont.

HIGH LAWN HOLSTEINS

In the past few weeks we shipped young bulls to V. J. Elgie, Sault Ste. Marie; S. Chuggison, Kilmour, Ont.; High & Honsberger, South Cayuga, Ont.; H. C. Martin, Melbourne, Ont.; G. T. Markham, West Lorne, Prince's; dam, "Holstein Hengerveld Keyes Red", No. 1, sire, "May Echo's" butter, 4 years. No. 2, same sire as No. 1; dam, a 2-yr.-old daughter of 26,000-lb. cow, "Calanthy Johanna King", a son of our "May Echo", a daughter of "Barkey's Hengerveld", first 20,000 lb., 4-yr.-old are priced below their value. If you need a head sire it will pay you to get our prices before you buy. Write, phone or come. JOSEPH O'REILLY, PETERBORO, ONT., R. R. NO. 2.

HOLSTEINS

Could spare 10 cows or heifers bred to the Great Bull KING SEGIS PONTIAC DUPLICATE. Have one yearling bull, and calves from 10 months R. M. HOLTBY, Manchester, G.T.R. Port Perry, R.R. 4

Lakeview Stock Farm, Bronte, Ont.—The home of Dutchland Colanthea Lad, 101 A.R.O. daughter, 4 over 11 lbs., and 7 over 20 lbs.; 3 of them new Canadian Champion Sir, 2-yr.-old, 34.65 lbs. Choice young bulls for sale. T. A. DAWSON, Mgr.

Fairmont Holsteins

Young bulls for sale, all sons of the great King Segis Alacra Catamy, whose ten marast dams average over 30 lbs. butter and good record dams, all from nearly 4.50 per cent. fat. All from 22,000-lb. granddaughter of Colanthea Johanna Lad, at prices that will sell them. Also cows and heifers bred to King Segis.

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

Holstein Cows Excel All Others

Proof is Found in 100,000 Official Tests For Profitable Yield of Milk, Butter and Cheese. No Other Breed Can Equal Them For the Production of High Class Veal. When fullness Holsteins Leads Their Usefulness Amount of Good Beef. W. A. Clemens, Secy., H. F. Assn., St. George, Ont.

RESERVE SALE

18 Head 8 PURE BRED Holstein Cattle and other Stock and Implements

THE herd consists of nearly twenty head, including a majority of young cows, several heifers, 2 bull calves, and one 18 month old bull (son of Sir Lyons Hengerveld Segis). A considerable number of the herd are from the well-known and highly bred bull, Sir Lyons Hengerveld Segis, and from Grace Payne and Baron Colanthea and Prince Abbecker Mercena. Some have been prize winners at Toronto Exhibition.

J. H. PRENTICE, Auctioneer J. C. BOECKH, - Willowdale, Ont. Tuesday, Dec. 5th, 1916 at 12.00 noon

News Heard From Mrs. E. D. Erwood in Brandon, N. Y., has just received a consignment of 11,928 lbs. of fat. The butter is 46c a lb. and is the best of about 18

## AN OPEN LETTER

Sydney, Nova Scotia, Nov. 18, 1916.

To the Farmers and Stockmen  
Attending the Ontario Provincial Fair  
at Guelph.

Gentlemen:—

Believing you would appreciate the opportunity of talking with brother farmers and stockmen throughout Ontario who have used SYDNEY BASIC SLAG, we have arranged for our representative, Mr. A. L. Smith, to be at the Fair and he will be pleased to put you in touch with such men. It will be well worth your while to hear what they have to say of this wonderful fertilizer.

No doubt you have often wondered if the glowing reports you read of Sydney Basic Slag are all true. This will be your opportunity to talk with men who have used Sydney Basic Slag and who, like yourself, have the welfare of the farming industry at heart.

Our booth will be in the building near the main entrance. Call and get the names of prominent breeders about Guelph who have used Sydney Basic Slag.

Yours very truly,

THE CROSS FERTILIZER CO., LIMITED.

P.S.—Look for the sign:

# Sydney Basic Slag

Made by The Cross Fertilizer Co., Ltd., Sydney, Nova Scotia

## Cutting Down the H.C. of P.

That's the particular work of the Ayrshire—to cut down the increasing cost of producing milk, butter and cheese on our dairy farms, or in other words, increasing our dairy profits from the labor employed and the food consumed by our herds.

### In the Model Dairy Test, at the World's Fair, Seattle

The Ayrshires actually made more butter, averaged more net profit than any of the other cows competing, as the following table shows:

Breed.		Av. lbs. fat per day.	Av. Casein per day.	Fat 'est. per cent.	Product Value.	Maintenance cost.	Balance.
Ayrshire	.....	1.875	1.175	4.02	\$50.56	\$26.65	\$21.71
Ayrshire	.....	2.196	1.362	4.14	41.21	24.72	16.49
Ayrshire	.....	1.856	.826	4.62	44.68	29.87	14.81
Dairy Breeds	11	1.289	.870	4.15	42.79	23.89	12.90
No. 2	2	1.200	.719	5.63	37.66	28.18	9.48
No. 3	1	.934	.595	5.04	28.79	26.93	1.86
No. 3	2	.961	.760	3.89	31.47	27.77	3.70
No. 4	1	.910	.762	3.94	30.09	32.16	2.07



A good many of our shrewdest dairymen are to-day putting much study on this cost of production and the amount of feed their herds are consuming for the returns given. The business man in the city realizes the importance of knowing just exactly how much it costs to produce an article for sale. There is no reason why we, as dairymen, should be less business-like. As milk and cream are to be paid for according to test—according to what it is actually worth—then, too, our herds must be selected with equal care—just according to the profit they will give after deducting cost of labor, feed, etc.

The Ayrshire has long been acknowledged as the economical producer among dairy breeds. The reason is that—

**SHE IS A HIGHER TESTER**—To Oct. 30th, 1916, 532 Ayrshires in R.O.P. averaged over 4%.

**A PERSISTENT HEAVY PRODUCER**—To May 1st, 1916, 224 mature cows gave an average of 10,254 lbs. milk and 419.90 lbs. fat. 318 R.O.P. two-year-olds averaged 7,352 lbs. milk over 4% fat.

**AYRSHIRE SIREs** are very prepotent—they transmit the high-testing virtue.

**AYRSHIRE FEMALES** are thrifty, good grazers, and very prolific.

And, above all, **THE AYRSHIRE IS A SHOW ANIMAL**, admired by all who love the attractive form of the perfect dairy cow.

For the man who desires to combine profit and beauty, full information can be secured by writing

W. F. STEPHEN, Secretary

The Canadian Ayrshire Breeders' Association



Huntingdon, Que.