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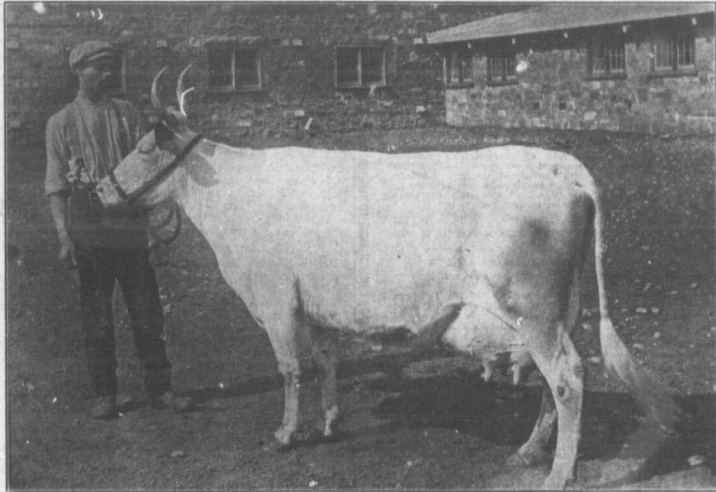
FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

JANUARY 2

1913



AN AYRSHIRE COW, THE PRODUCT OF A WISE SYSTEM OF BREEDING

Is it wise for one calf to have another calf? Many breeders of pure bred stock say "Yes." They breed their heifers to freshen when 20 to 26 months of age—mere calves. Sometimes these heifers make good cows and the breeder believes that his practice is justified. Prof. H. Barton believes that this practice is bad. "Lizzy Glen," here illustrated, is a product of Prof. Barton's system of breeding. She dropped her first calf at three years of age, and holds an official record of 9,116 lbs. of milk, testing four per cent. fat. Note the splendid development of this cow; also her feminine quality. Then read Prof. Barton's article, page three.

—Photo courtesy Prof. Barton.

DEVOTED TO
BETTER FARMING AND
CANADIAN COUNTRY LIFE

The LINK-BLADE Skimming Device

Has made the "SIMPLEX" Cream Separator of greatest efficiency. See this device!

The "Simplex"

Note this illustration of the Link-Blade which is exclusive on the "SIMPLEX" Cream Separators.

This Link-Blade device is more efficient than the so-called Disc system used in most competing machines, for the reason that there is no interference or re-mixing of the incoming new milk with either the partially separated milk or cream.

That the Link-Blade is more efficient than other types, we have proven many times by testing the same in bowls of other makes of separators. It always results in an increased capacity of anywhere from 15% to 50% or even 100%.

Because the Link-Blade system is more efficient, we can produce a given-sized bowl, say 700 lb. per hour bowl, that is of smaller dimensions and weighs less than other bowls, to do the same amount of work. This is very important to you.

This efficiency of the "Simplex" is not a mere matter of our saying so. It is a fact that any unprejudiced person can readily see, if they will make a comparative test.

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WE WANT AGENTS IN A FEW UNREPRESENTED DISTRICTS

Owl Brand Cotton Seed Meal

is the most economical you can buy. Guaranteed to contain 41 per cent, protein. You can buy this feed laid down at your station at all points in Ontario south of the G.T.R. line from Ottawa to Parry Sound, for \$35.00 per ton.

We can also offer a complete line of first class poultry feeds. We quote the following prices per hundred pounds on a few staple lines: Beef Scrap, \$4.00; Blood, Meat and Bone, \$2.25; Poultry Bone (three different sizes), \$2.25; Ground Oyster Shells, \$1.00; Poultry Grit, 90 cents.

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Write us for prices on Linseed Oil Cake Meal, Gluten Feed, Feeding Tankage, Etc.

ALLEN & SIRETT, 23 Scott St., TORONTO
ONTARIO

The Sheep Situation in Eastern Canada

R. H. Harding, Middlesex, Co., Ont.

Why are sheep decreasing in this country? People blame it on the dogs because they can not advance another reason. But I know of people who are out of sheep and never were troubled with dogs, and others who have been troubled with dogs and are still in sheep. This past summer, I have been studying the sheep situation in Eastern Canada and a few notes on the sheep situation as I found it may be of interest.

The Maritime Provinces are ideally adapted to the growth of roots and clover, two excellent sheep foods. The salty air also is favorable to sheep husbandry. If Maritime farmers could get sheep of good breeding as we have in Ontario, they could beat us in producing sheep of great quality. But like most people, Maritime farmers are inclined to think they are in the best and it is, therefore, difficult to convince them that they must improve their foundation stock.

I believe that the dog laws in the provinces down by the sea are deficient. Anyone with more than one dog, should be taxed so heavily that he will soon get rid of the other. It is generally a pair of dogs that make trouble with the flock. Maritime Province men are losing at least 100,000 lbs. of wool a year through late shearing as the wool is rubbed off on fences, shrubs, etc. Docking, castrating and dipping are almost entirely neglected. Good sires, however, are the prime need for sheep improvement in those provinces. Farmers there have been exchanging long tailed rams with their neighbors too long. A Maritime Sheep Breeders' Association has now been formed and we may expect a gradual awakening among sheep lines.

IN THE SMALLEST PROVINCE, Prince Edward Island, I believe, is one of the most ideal sheep countries in the world. We in Ontario would not have a chance with them in sheep competitions did they get the best foundation stock. Prince Edward Island has rich grasses and a fine climate; but sheep have decreased at a tremendous rate.

Almost any of the mutton breeds are suitable to this little province. In Nova Scotia and New Brunswick, I do not consider the heavy, long wool breeds to be as suitable as the smaller, short wool breeds. The use of immature sires has been a great cause of inferior quality in Maritime sheep. I would suggest that they use well developed sheep and no lambs, unless the latter are especially well developed.

In marketing some of the farmers there are ahead of us in Ontario. Some of the shepherds in Prince Edward Island have formed a co-operative selling league and so great has been their success that while lambs sold at \$1.50 to \$2.50 each in 1901, association members realized five cents to seven and one-half cents a pound in 1912.

We in Ontario are by no means perfect in our practices with sheep. There is a lot of missionary work to be done right here at home. I have been in a part of this province where a pure bred sire was not known and a docked lamb a matter of curiosity. Too many lambs are sold in the fall of the year with a glutted market resulting. These lambs, however, are not consumed immediately. They must be kept in cold storage, and feed those lambs a little longer and market more evenly, we would get the cold storage man's profit.

A MONEY MAKING PRACTICE

Dipping is but little practiced in Ontario. It improves the quality of the fleece and will pay when practiced

twice a year. I would dip right after shearing and again in October.

I have been asked if it would not be better to wash the wool on the animal. This would necessitate late shearing as there is no water fit to go into early in the spring. This late shearing would lose us at least 200,000 lbs. of wool a year, besides the discomfort that it would cause the sheep. In addition, sheep grow very rapidly after shearing. I have a warm place for my flock where they can go when sheared, in case they feel cool outside. But when all is said and done, what our sheep industry needs most is intelligent attention on the part of the farmer. Sheep are the only class of stock on the farm that do not receive our attention. We groom and carry our horses, we give every attention to our cows and pigs. Did we give the same attention to sheep there is no animal would pay better. It is the little things that make the difference in the count and these are the things that are neglected.

The Fit of the Collar

By O. M. Olson

If indifferent and careless drivers were compelled to endure a fractional part of the suffering borne by horses with sore shoulders, it is certain that much better care would be taken of the horses of the country. It is certain that a man would pull few loads if he had a pair of sore shoulders.

In nearly every instance the sore shoulders of the work horse can be traced to an improperly fitted collar or hame, or still worse, to poor care of the collar which may fit the horse. The collar worn by the horse should have a bearing surface that is smooth and pliable, and that fits the shape of the shoulder accurately. Over this collar the hame s'ould be adjusted so as to properly carry the draft of the load. If, in addition, the collar aid the shoulders of the horse are cared for, the chances of sore shoulders have been reduced to a minimum. Care should be observed in the use of sweat pads. They should be used only when the horse loses flesh and the neck shrinks. In that case another collar may be advisable.

FITTING THE COLLAR
A collar, to fit adequately, should conform to the shape of the shoulder and should be neither too large nor too small. The opening at the bottom of the collar between the collar and the neck should admit the flat of the hand, and no more. The collar should fit the sides of the neck without pinching. A new collar may be fitted the first time by soiling the neck with water. It should never be used generally on any other horse.

The draft of the tug should lie about one-third way up on the front of the collar, and, in every case, the hame should fit the collar when buckled snugly. The mane of the horse should not be permitted to work in under the collar, and accumulations of sweat on the collar should be removed carefully each morning. In the case of sore shoulders, the owner should always remember that "an ounce of prevention is worth a pound of cure."

There are more reasons than moral ones for being honest. Honesty is a paying business proposition.

Everything that we can get done up this fall will be that much to the good in the rush next spring.

Do you grow your own seed grain or do you buy? In either case, a trip through the fanning mill will improve it.

Twice a day is quite enough to feed dairy cows. Cattle provided with four stomachs do not need feed in front of them all life time.

Issued
Each Week

FARM AND DAIRY & RURAL HOME

Only \$1.00
a Year

Vol. XXXII.

FOR WEEK ENDING JANUARY 2, 1913.

No. 1

AT WHAT AGE SHALL WE BREED OUR DAIRY HEIFERS?

Prof. H. Barton, Macdonald College, Que.

Why Are There So Many Under-sized, Unprofitable Milk Cows in Districts Where Breeding and Feeding are Both Apparently Good? Prof. Barton Answers this Question and Gives Concrete Illustrations to Prove the Correctness of His Conclusions.

EVERY YEAR sees a stronger demand for milk cows. Prices have rapidly advanced, and until the developing and marketing of good cows for milking purposes offers one of the most fertile sources of revenue on the farm. Today 10 good grade cows are worth at least \$1,000, a handsome payment on any farm, and with little capital involved at the outset.

What is true of grades is even more true of pure breeds; the supply of the right class is merely a drop in the bucket. To many, however, the pure bred is neither practicable nor advisable. This is no disparagement of the pure bred but rather a statement in its interest when both capital and knowledge are none too plentiful. At the same time in the development of cows which applies in producing a certain class of grades is equally applicable with the pure bred.

The breeding of marketable cows is an inviting proposition both for their earning and selling value. Very few of our otherwise good farmers, however, are doing it with any great measure of success. One trip through even the best districts will suffice to show what the situation is. I have just completed a trip through a part of Ontario that is generally conceded to be an exceptional district, a district in which one of our best dairy breeds was early introduced and generally accepted, and yet in this district it would seem that while the cows show breed in color, markings, etc., not more than 10 per cent. of them could be considered saleable at really remunerative prices, or would be very profitable to keep.

THE PROBLEM OUTLINED

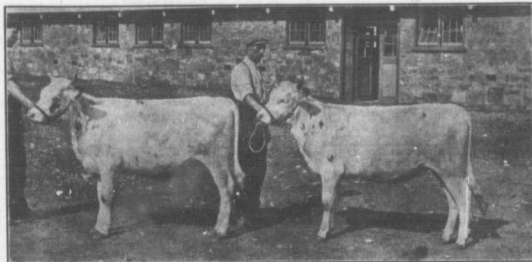
Why should this be so? On every farm where successful dairy farming is practiced, the cows, in grades, are the big factor in the success of the place. What will account for so many small, undeveloped, miserable looking specimens of cows with poor constitution, little capacity and less appearance of milk? Valuable as our record and judging work is it requires neither scales nor a judge to distinguish between really good cows and the general class of the country.

To me the problem has been one of interest for some time. I have carefully observed the practice and results on different farms in various districts and countries. I have asked questions of both successful and unsuccessful men, and

have done some investigation work at Macdonald College in the matter of cow improvement. There are various factors at work. Just what the relative importance and influence of certain factors may be, is something about which there is much difference of opinion and a lack of definite information. In this article most of the discussion will be confined to one factor, "age to breed," or the age at which a heifer is bred to drop her first calf, as a permanent influence on her outcome as a cow.

CHANGE OF BREED WILL NOT DO

Many would place this factor secondary to a number of others; perhaps the one factor most



Is it Wise to Breed Heifers so Young as These?

Here are two well developed, big-bodied heifers. Should they be bred? Many breeders would. Prof. Barton, under whose charge is the dairy herd at Macdonald College, Que., will not. In the adjoining article Prof. Barton tells why he believes early breeding injurious and late breeding advisable. Read of the results of his investigations with their dairy herd at Macdonald College.

—Photo courtesy Prof. Barton.

emphasized for the improvement of our cows at the present time is that of breed. Important as this it would seem, however, that while the matter of breed and blood is the stumbling block for many, it, by no means, is the solution for hundreds who have evidently counted on making it such. In the district before mentioned where one of our best breeds was early introduced and became generally popular, some of the best animals the breed has known were freely used, the breeders have stuck by their breed for years, and yet the great majority of cows as developed are hardly marketable. The associate of breed in the general doctrine, has been feed. Undoubtedly many fail here, yet, given breed and feed we still have widely different results.

There is a popular impression among dairy cattle men that if a cow is to reach her full inherited capacity the milk producing habit must be brought about early in her development. This theory was much emphasized a few years ago.

The practice of early breeding was for most people an easier one than that of withholding the breeding period. Consequently it readily became popular and was, and is, practiced to such an extent that it is largely responsible, in my opinion, for a great many of the inferior cows in the country to-day.

There are exceptions to every rule. We occasionally find a man who has been eminently successful in breeding large, strong, capacious cows and yet have them freshen at about two years of age. We know too that with some individuals it would be a mistake to delay breeding later than would have the heifer freshen at about 27 months of age, for where she is developing rapidly and likely to mature early there would be danger of her growing unduly coarse and rough, and perhaps giving difficulty in breeding.

EARLY MATURING BREEDS ARE SMALL

We have also to admit that breed may be a consideration in that some breeds mature earlier than others. But with breeds we must notice as well that the early maturing ones, those lending themselves best to the practice of early breeding and upon which it has been most extensively employed, are cattle of small size. Among these breeds and within them we have striking examples in the Jersey and French-Canadian.

Again the ambition for phenomenal records with young heifers may be mentioned, and while we must admit that here exceptions are common we must at the same time point out that the great majority of phenomenal records when made immature, are never repeated. In other words, the majority of heifers with exceptionally high records do not reappear, and further, the list of record making progeny from these heifers is usually a short one. A study of the Holstein-Friesian blue books of America will verify this statement.

At Macdonald College we have four breeds represented, including Holstein, Ayrshire, French-Canadian and Shorthorn, and while we have more results to report in this connection with Ayrshires than with the others, we have a few examples of each breed. We have in each breed full grown cows and also heifers which have been bred late or to calve for the first time from 30 to 36 months of age, and a few that have calved for the first time when about two years of age.

A CONCRETE CASE OF INJURY

Among the first lot of heifers bred at the College was one pair of Ayrshires, extremely well developed for their age, and in competition in judging classes with others of similar age the students did not hesitate to pick them out and place them first and second. These heifers

were bred to calve at 26 months of age. They have freshened each year since and made creditable milk records, but they are small and shallow, with limited capacity for both feed and milk. Their mates were held and bred to calve at about 32 months of age, and to-day in placing with the developed cows our students just as readily reverse the placing of the same group.

This second lot of heifers that were bred late were inspected by a few Ayrshire men a short time before they freshened at about 32 to 34 months of age. These breeders criticized the heifers for being somewhat coarse, heavy in hide, thick at the neck and rough about the head. Two years later the same group of heifers was in the short course class and the refinement and character of the lot were repeatedly mentioned. Without exception they had developed into large, strong, capacious cows. A number of them have qualified for the advanced registry. With the exception of one that is of a poor strain, any of them could quite easily qualify with a creditable margin.

In the case of three other heifers that calved when immature, two of which were bred accidentally by a scrub bull breaking into the pasture, we milked one from the start and allowed the others to run without being milked. They suffered a little for a few days, but soon dried off. All three were bred in about six months time, thus giving them an extra run. One of those allowed to go dry died next winter, the other one calved in due time; while she developed considerably in her extra dry time she is still among the small class of cows and limited in her capacity for milk. Her mate, which was milked regularly except when she was given more time between first and second calves than in the case of others bred at a proper age, shows also some advantage in size, but she never overcame her first check.

Thus far we have noted 18 individuals of the four breeds mentioned. Our work is not conclusive, but certainly in our practice, with fairly liberal feeding yet no attempt to do any forcing, if an average heifer is bred to drop her first calf before she is at least 30 months old her development is seriously checked and she is not likely to reach her full capacity as a cow. Some individuals should be bred earlier than others; with those that develop quickly there is a tendency towards coarseness and bareness when breeding is unduly delayed. On the other hand a little grossness in a heifer at freshening is no objection.

I have found that many of our best breeders in this country, in England and in Scotland, share my opinion as to the advisability of early breeding, and thus our observations here seem justified.

A U. S. EXPERT TESTIFIES

Prof. E. K. Lewis of Missouri, investigated the same point, and in his book on Dairy Cattle, remarks: "Breeding too young undoubtedly results in small cows. It is impossible for a young cow to digest and assimilate a sufficient amount of feed to produce milk and growth at the same time. The production of milk on account of its relation to reproduction is a dominant function, and will not be materially checked to allow growth to continue. For this reason it can hardly be expected that a heifer calving young and immature in size will develop into a cow of nor-

mal size if she calves regularly each year afterwards."

With those who have the exceptions, who are satisfied with them and prepared to defend their practice there need be no quarrel. For those, however, who have followed one breed, who feed fairly liberally, practice early breeding and finish with second rate cows (and I believe there are many in this class) I make this suggestion



Note the Ideal Type of This Record Making Jersey

Sadde Mae, the pure bred Jersey cow here illustrated, made 13,049.85 lbs. of milk and 750 lbs. of butter in 365 days. She is owned by E. H. Gee, Halldam Co., Ont. Note how closely the conformation of this cow approaches that of the other record makers of the Ayrshire and Holstein breeds published in Farm and Dairy recently.

as a probable aid—delay breeding a few months.

Last winter there was much complaint about the silage freezing. The freezing depends oftentimes on the surface. If the silage is kept dug down a little around the walls so that the surface is convex, it will not freeze nearly so much as where it is dug out saucer shaped.

If you can get around it, don't use barbed wire in constructing fences between pastures



Sheep Farming is Still Conducted on an Extensive Scale in New Zealand

Australasia, which includes New Zealand and Australia, has more sheep than any other section of the world. Ranching is still profitable in Australasia and sheep farming is done on a big scale. Our illustration herewith shows a few of the 1912 crop of lambs on a New Zealand ranch. They are good, pure breeds, too.

where horses are to be kept. They will be playing and pawing into it, and a ruined or dead animal is often the result. The price of a fair horse, as the mark: goes to-day, will buy more woven fencing than you probably think.

Why does the horse whinch when you put the frosty bit in its mouth? Just put it in your own mouth some morning when the temperature is down around zero, and you will understand. After that we predict you will carry a bucket of hot water down to the barn in which to warm up the bits.

Rid Clover of Buckhorn

T. G. Raynor, Seed Division, Ottawa

The seed of rib grass or buckhorn is dark brown in its matured color, and about the size and weight of a clover seed. It can easily be detected in the clover seed by close examination. Buckhorn is not so broad at one end as red clover and has a slight depression or dint in one side; something like the seed of a date. For this reason it has been called a "cane." The other side is smooth and roundish. The seed has also a gelatinous or sticky feel when dampened with water, and this feature is now being successfully made use of to separate it from red clover seed.

The process in brief is to take the red clover seed in which the buckhorn is present and dampen it with a certain percentage of water. This will develop the mucilaginous nature of the buckhorn, but in the clover seed this substance is not developed. A certain amount of fine sawdust is added, and this sticks to the buckhorn seeds, making them much larger. With sieves of the proper size the operation is now quite easily made. If any farmer wishes to try the plan, and it would be quite practicable for small amounts of seed, such as individual farmers would sow, here are more explicit directions as given in a bulletin issued by the U. S. Department of Agriculture:

JUST HOW TO DO IT

"The red clover seeds infested with buckhorn are covered with water of about room temperature, and well stirred, in order to wet all the seeds thoroughly. The seed are allowed to stand in the water for five minutes if the latter is 65 degrees F., or over, for eight minutes if below that temperature. The water is then drained off thoroughly. This may be done with any common strainer or sieve of about 22 meshes to the inch. The moist seeds are then scattered into dry dust and thoroughly mixed until the seeds fall apart freely, and no small seed masses remain. This mixing may be done with the hands, with a rake on the barn floor, or with any suitable apparatus. It may be accomplished in two or three minutes, when it will be found that the sawdust has absorbed the free surface moisture from the clover seeds, and that all the mucilaginous buckhorn seeds have become coated with the sawdust. The proportion of dry seeds to sawdust should be as follows: Seeds, one part; sawdust, four or five parts (preferably five parts of resinous sawdust are used). Two screens are required to effect the separation of buckhorn seeds from the red clover seeds; an upper one of sheet zinc, perforated with round holes of one-fifteenth inch diameter, and a lower one of No. 22 mesh wire cloth." If the treated seeds are fed slowly the separation will be quite effectual.

In this way farmers who have this plant in abundance on their farms can to a large extent eliminate the danger of producing red clover seed with buckhorn in it, in the future.

It is very easy to over-feed the horses now that work has ceased. With prices of feed as they are, there is a great temptation to under-feed. Let us run betwixt and between and our horses will be in good health and ready for work next spring.

Feed and Comfort For Dairy Cows

A. S. Turner & Sons, Wentworth Co., Ont.

We believe that all stock, pure bred and grade, should be properly housed, cared for, and fed. We believe more. We believe that too much care cannot be given the dairy cow if the best possible results are to be had.

To have the best dairy cow we begin when the calf is dropped. We have always found it best to take the calf away before it takes any nourishment from the dam. We then milk the cow, giving the calf two pounds of this colostrum for its first meal, gradually increasing to eight pounds of milk. This quantity is given until the calf is thought old enough to take other food.

We always keep our calves in good growing condition with plenty of food, especially bran. In fact, they should always be kept growing, and in good flesh to make large, healthy cows. Great mistakes are made in turning calves out when too young to pick their own living in hot summer, when flies are bad. We always keep them in our stables for their first season.

COMFORT IN WINTER QUARTERS

In caring for the dairy cow, we aim to make her as comfortable as possible when stabled. We give our herd of Ayrshires plenty of bedding, also lots of fresh air. We never have them over warm; if anything, they do better with the stable on the cool side.

Two very important points are fresh air and exercise. We always turn six cows out for half an hour in their turn if the weather is favorable, so as to give our entire herd exercise and fresh air.

Grooming the cows is also an important thing. In summer our cows are sprayed with Dr. Williams' Fly Destroyer every morning. We do not believe in leaving our cows out at night when the ground becomes damp and cold in the fall. They are then much better in the stable. A cow should have water before her at all times, as a heavy milking cow partakes of a large quantity in the course of a day.

BACK TO THEIR LIKING

In feeding, we believe in studying each individual, giving her what she will consume and the foods her tastes desire. In our experience we have found no two cows to consume the same amount, or to have the same tastes. For instance, some cows are very fond of bran, while others are fond of oilcake.

No cow is given more to eat than she will eat up clean every meal. Neither should she be forced to eat that for which she does not care. We will not here state what we feed our cows. That is impossible. We could give, however, did space permit, the food consumed by each individual in our herd.

We have found that in order to get the best possible results, the dairy cow must not be neglected. She must be fed at regular hours.

When once a cow gets used to her feeding hour she expects to be fed then. And lastly, always go around the cows as quietly as possible.

Winter Care of Colts

Dr. C. C. Lipp, Minn.

With the winter season at hand comes the increased necessity for the proper care of the spring colts. This is a matter of sufficient importance to demand careful attention. Two fundamental principles must be kept well in mind, because upon their observance depends to a very considerable extent the success or failure of the project.

In the first place, the quality and quantity of feed demands attention. The colts are growing and developing animals, whose value at maturity is measured to no inconsiderable extent by the degree of development of bone and muscle. Satisfactory development can only result when proper feed is supplied. The formation of

We'll Do Better Next Time

Editor, Farm and Dairy,—Your Breeders' Annual was splendid. The pictures were ideal, the ads. so well written that I read them with great delight. From cover to cover it could scarcely be excelled as a farm paper.—James E. Orr, Middlesex Co., Ont.

bone and muscle requires rations containing the so-called tissue builders in large quantities. In a grain ration of oats are combined the necessary elements for the formation of bone and muscle better than in any other single grain, and for this reason oats form a most necessary part of the ration. Other grains and mixtures may be substituted, but none of them are better than oats. However, if other rations are fed, remember that the demands of the animal require a quantity sufficient for tissue formation as well as for energy and warmth. To feed sparingly is to interfere with development to such an extent that its effects may remain in evidence throughout the life of the horse.

WITHOUT EXERCISE—FAILURE

Daily exercise is the second fundamental principle in the successful wintering of colts. Only failure can result even if tissue building material is fed in sufficient amount, but the daily exercise is insufficient. Not only is the maintenance of vigorous health impossible, but the development of newly formed tissue is seriously hindered. It is common knowledge that any tissue not in daily use soon becomes weak, and if the disuse continues long enough, becomes practically worthless. How can strong muscles be developed except by exercise, and how is exercise possible when no opportunity is provided for it?

A Talk on Heredity

"The influence of heredity is a vexed and difficult question," said Prof. H. Barton, of MacDonald College, Que., in conversation with an editor of Farm and Dairy recently. "Before we can draw any definite rules governing heredity, we need the testimony of a great number of cases from which to draw our deductions. In investigations along this line we in Canada are somewhat behind our American cousins.

"The most extensive investigations along the line of heredity are those conducted by Davenport who studied the records of 608 cows. He found, as all investigators must find, that there is a great deal of variation, and that like does not always produce like. He found, however, that the majority of good cows come from good cows and that the majority of poor cows come from poor producing stock. The fact, however, that good cows may produce low producing daughters necessitates close weeding and culling in the best of herds all the time.

"For the same reason the man who sells all of the calves produced in his herd no matter how good may be the mature animal, is in all probability doing his breed some injury as we may expect some poor individuals to appear. I know that many men are marketing calves on the strength of a few phenomenal records. This is not right. The further we get away from the average production of the breed, the harder it is to find a male with qualities equal to the female, and besides there is always a drag to bring the offspring back to the average.

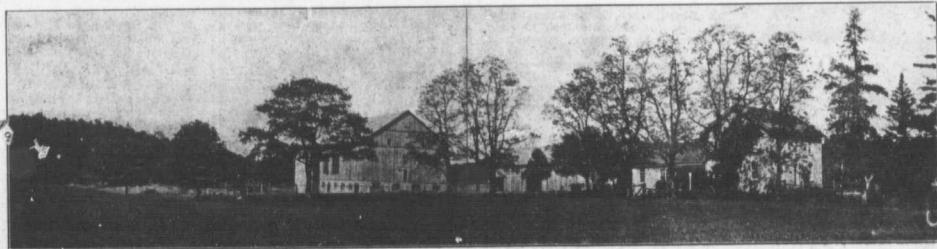
WHAT THE RECORDS SHOW

"A study of Record of Merit tests made by Holstein cows shows that 90 per cent. of the females registered have also ancestors recorded in the record book. The requirements for advanced registry is not a difficult one to make, hence at the bottom many females might get in that have no recorded ancestors. Harper of Cornell, has shown that as production increases the percentage of females making the higher records, and also having record making ancestors is higher than at the lower levels of production. When we double the requirements for registry we find that not a single female qualifying is bred from any other than record making ancestry.

"Then the general conclusion would be that the safest plan in breeding for greater production is to use stock from record ancestry," we suggested.

"Exactly," replied Prof. Barton. "There may be good cows outside of advanced registry lists but all evidence on hand goes to show that in the main A. R. O. cows are breeding A. R. O. offspring."

The man who is emptying his silo with a five-tined manure fork can make no better investment than in a big wide ensilage fork.



Can the Western Prairies Offer Anything so Attractive as This Beautiful Ontario Homestead?

A gently rolling country, a landscape rendered beautiful by many splendid trees and forest groves, and splendid farm buildings, give to rural Ontario an attractiveness that cannot be duplicated in any of the newer prairie provinces. Were the good points of Ontario as widely advertised as are the good points of the West, Ontario people would have a bigger appreciation of the many merits of their province. The standing here illustrated is that of Chris. Richardson, Halton Co., Ont. There are many like it in Ontario. Are there any like it in the West?

THE DAIRYMEN'S ASSOCIATION OF WESTERN ONTARIO

Extend to you a very Cordial Invitation to attend

THE 46th ANNUAL CONVENTION AND WINTER DAIRY EXHIBITION WOODSTOCK JANUARY 15 and 16, 1913

\$500 in PRIZES for Butter, Cheese and Dairy Herd Competition with Silver and Bronze Medals

Cheese Buyers' Trophy, valued at \$150.00 for Sweepstakes

MANY SPECIAL PRIZES

EXCELLENT LIST OF SPEAKERS. THREE SESSIONS EACH DAY.

Each of which is of interest to Milk Producers

WEDNESDAY AFTERNOON SESSION SPECIALLY FOR FARMERS

EVERY PERSON MADE WELCOME. REDUCED RATES ON ALL RAILROADS

FOR PROGRAMS APPLY TO

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Stratford, Ont. London, Ont.

CALDWELL'S MOLASSES MEAL

Is the only convenient form in which pure cane molasses can be fed to animals. The meal is dry to the touch—has an appetite-provoking odor and is greatly relished by the animals.



Caldwell's Molasses Meal is a very economical as well as a highly efficient feed. It practically costs nothing because it takes the place of an equal amount of other feed. It also makes other feed more palatable, digestible and hence more nourishing, and is an excellent preventative and eradicator of worms.

It puts spirit into horses—makes them look better, feel better, live longer and worth more at any stage. The Meal keeps cows fat and contented—hence they give more milk. By all odds the best 'conditioner' for steers, sheep, lambs, and hogs—brings them to maturity—their highest market value very quickly.

N. B.—Guaranteed by the Firm, and used by all the larger feeders. Caldwell's Molasses Meal cuts general forage bills by a handsome margin. You can buy the Meal cheaper from us direct, or from your feed store than you can buy the raw molasses alone. Write for money-saving facts! Clip out coupon—mail to us, and we will send you full particulars.

THE CALDWELL FEED CO., LIMITED
Dundas, Ontario

"I"

Please send me booklet and full particulars as to cost, etc. of Molasses Meal.

Name

Post Office

Province

Illawarra Dairy Cattle

We in Canada are so accustomed to speaking of our four breeds of dairy cattle that we almost forget that the breeds of dairy cattle well known to us form a comparatively small percentage of the dairy cattle breeds of the world. The Brown Swiss has been recently introduced and proved her merit as a dairy cow. We hear with surprise that in Denmark they have a breed of cattle that averages almost 7,000 lbs. of milk a year for the whole kingdom, the Rød Danish cow. In their special dairy breeds that are unknown to us. And now we discover that in New South Wales, Australia, they have a special breed of dairy cattle there that they choose to call the Illawarra. This breed Australians have been busy developing since 1816. Illawarra is a beautiful and fertile

tempted for 70 years to produce this dual purpose type, but are now working for the pure dairy type which they now know to be most profitable.

Monster Bullocks

W. Southern, Brant Co., Ont. The Shorthorn possesses fine milking qualities. The value of this breed for dairying is shown by Mr. A. W. Smith, Middlesex Co., Ont., in Farm and Dairy of Dec. 5th. So much for are capable of being developed into enormous beefers is proved beyond question by an article that I have just read in the *Nottinghamshire* announced that a bullock will be entered at the Christmas Fat Stock Shows at Birmingham, Leeds, York and Malton this year, which weighs no less than 220 stones. Although cen-



A Splendid Specimen of a Little Known Breed of Dairy Cattle

Starting with many breeds 70 years ago the farmers of the Illawarra district of New South Wales, Australia, have evolved a breed all their own that they call the Illawarra. After striving for many years to make this a dual purpose breed they have at last concentrated their efforts on milk production and with most gratifying success. Pink Pearl, the cow here illustrated, produces in her morning milking 32.5 lbs. of milk testing 4.2 per cent butter fat; in the evening milking 35.6 lbs. of 4.5 per cent milk. She has an official record of 22.4 lbs. of commercial butter in one week. The Illawarra is only one of the numerous good dairy breeds of which we know little or nothing in this country.

district covering about 250 square miles. It was originally settled by English gentlemen who took along with them valuable herds of Longhorn, Shorthorn, Hereford, Devon, Holderness, Red Poll and Ayrshire cattle. For a few years these cattle were bred purely. After that mixed breeding came in vogue and the final product is the Illawarra cow as we have her to-day. One, evolved from crosses of the Longhorn and Shorthorn, are tall and lengthy, slightly inclined to be coarse but splendid dairy cattle notwithstanding. The other type evolved from crosses of the Devon and Arrshire breeds with a small mixture of the blood of the others breeds mentioned are low set. The mixing of these two distinct and opposite types of cattle has produced the best strains of dairy cattle of the Illawarra breed.

Some years ago Illawarra breeders attempted to improve their animals by importing English Shorthorns. The results were most disastrous to the milking qualities of the breed. Accordingly the Illawarra Dairy Cattle Association have since made production and udder formation their aim and object in the development of the breed.

The history of the Illawarra breed illustrates the impossibility of producing a dual purpose type of cattle that will be profitable both as milkers and beef animals. Illawarra dairymen at-

tempting a record in the memory of living persons, Mr. Lockwood's bullock does not come up to the one noted in the *London and European Review* entered in 1787. There mention is made of a bullock being inspected by His Majesty the King, that weighed 280 stones or 3,500 lbs. In 1784 we have records of an ox killed in York, England that weighed no less than 295 stones. So much for the beefing qualities of the Shorthorn.

A few months ago 500 head of Shorthorn cattle including several bulls were purchased in Nottinghamshire and Leicestershire and shipped to Austria by order of the Government of that country to be used for stock improvement. Evidently Austrians appreciate the merits of the Shorthorn.

The almost universal change from leaf to dairy cattle is due more than any other factor to the high cost of land. Beef cattle won't make interest on \$100 land. Dairy cattle will.

On page 39 of the December 5th issue of Farm and Dairy, Mr. Seager Wheeler was credited with the production of the "Marquis" wheat. This is a mistake, as Dr. Saunders, at the Experimental Farm, Ottawa, bred this wheat and introduced it into Saskatchewan in 1907. Mr. Wheeler deserves credit for having made the wheat well-known and popular, if not for originating it.

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The Feeders' Corner

The Feeders' Corner is for the use of our subscribers. Any interested parties are invited to ask questions, or send items of interest. All questions will receive prompt attention.

Experience in Feeding Alfalfa

Wm. Stewart & Sons, Northumberland Co., Ont.

Last year in feeding one of our cows in Record of Performance test we had an experience that showed us with remarkable clearness the value of alfalfa hay for milk production. We were feeding this heifer a ration of ensilage, alfalfa hay and oil meal. We thought that by adding bran we might add to the good record she was already making. The additional ration, however, did not raise her production half a pound a day. We dropped the bran and added a mixture of grain and she came up three pounds a day. We again dropped the grain and added bran and the heifer dropped back to her original production. We repeated this experiment several times, with the same results. We then added the bran in addition to the grain mixture, but even then the heifer's production remained stationary. This proved clearly to us that in alfalfa hay the heifer was getting all of the protein required and in the bran, which is a food rich in protein, we were throwing so much money away.

This heifer gave 9,783 lbs. of milk in nine months and 21 days containing 4011.2 lbs. of butter fat. When we dried her up she was giving 24 lbs. of milk, and dropped her second calf in 11 months and 30 days. Surely this is a good record for a two-year-old heifer, milking such a short time. It is also a good recommendation for the feeding of alfalfa to produce milk records.

Corn or Roots?

Prof. G. E. Day, O. A. C., Guelph
1. Corn produces more dry matter per acre and produces it at a lower cost than roots.

2. In cases where rations without roots are well adapted to the requirements of the animals, the addition of roots need not be expected to effect any marked improvement. In such cases, the dry matter contained in roots is a fairly accurate measure of their feeding value. This point is brought out in the comparison of rations containing roots and silage for dairy cows and steers, where silage furnished the necessary succulence. It was also brought out in the Danish experiments with swine, where a ration composed of dairy by-products and meal was fed against the same rations with roots added. The dairy by-products furnished the necessary variety, and the roots were valuable only in proportion to the dry matter which they furnished.

3. When a ration lacked the necessary variety and succulence, the addition of roots effects an improvement out of proportion to the dry matter which they contain. It is in such cases that roots show a value higher than the composition would indicate. This point has been demonstrated in tests with swine, where an exclusive meal ration has been fed in comparison with a ration of meal and roots.

4. Roots affect the composition of the animal carcass. It has been demonstrated that roots give a carcass more blood and heavier vital organs than is produced by a dry ration. This point is of great significance. The possession of an abundant supply of blood and of fully developed

vital organs must be an immense advantage to the young growing animal, whether intended for feeding or breeding purposes. This is a point which many of our best feeders recognize, and there is little doubt that roots will continue to be a popular crop on many farms where corn and the silo play an important part.

Live Stock at Toronto

How to encourage the small exhibitors was the principal theme under discussion at a meeting of live stock men called by the Canadian National Exhibition Association, Toronto, a short time ago. The establishment of amateur classes did not meet with approval, J. M. Gardhouse, Weston, telling how a prize offered by the York County Council for an amateur exhibit at the Provincial Fat Stock Show had attracted only a single entry, and other experiences were along the same line.

It was finally recommended that the prize list be extended to comprise fifth, sixth and seventh prizes, though the proposition that the first and second prizes be cut proportionately was not nearly so popular. Another proposition, enthusiastically received, was that the association pay all freight on live stock from Ontario if the Dominion Government will pay freight on all exhibits from points in other parts of Canada.

HIGHEST PRICE FOR CREAM

T. EATON CO. LIMITED is now paying 31c per lb. for Butter Fat. We buy cream, sweet or sour, of good flavor. We furnish the cans and pay the express charges within a radius of 250 miles of Toronto.

We test and weigh each can on arrival, and send you a statement for same.

We pay all patrons once a week, and the price is increased as the price of butter advances.

Drop us a card, and we shall be pleased to furnish you with any further information you may require.

THE T. EATON CO LIMITED
TORONTO - CANADA

MORE MILK—MORE FLESH
Produced by Cotton Seed Meal than is possible with any other feed. It's six times as rich as corn. Guaranteed 41 to 45% Protein. Try a sample ton. You will buy more. Price, \$33 per ton. Windsor, St. Thomas or Woodstock; \$33.80 Berlin or Baden; \$34.20 Barrie; \$34 Toronto; and \$35.10 Peterboro. Send check for trial order. Ask for our free booklet. The J. E. BARTLETT CO., Detroit, Mich.

Edward Charles Ryott
AUCTIONEER AND VALUATOR
Pedigree Stock Sales are my specialty. Many years' successful experience out from Woodstock, Oxford Co., Ont., qualify me to get you satisfaction. Correspondence solicited. — 178 Carlaw Avenue, Toronto, Ont.

Progressive Jones Says: "Be Certain You Use the Proper Fertilizer"

THOSE who have made an exhaustive study of plant life state that to get best results it is of the utmost importance to select the correct fertilizer for the particular crop you intend to grow, and to use the right amount to suit the condition of your soil. There are 14 different

Harab FERTILIZERS

FREE GUIDE
Write The Harris Abattoir Co. for a copy of their booklet and complete guide to correct fertilization. The correct fertilizer for each particular crop, and the amounts to use, are clearly shown.

prepared from tested, absolutely reliable formulae. The fertilizers are mixed with the greatest care and exactness. I've seen them being made myself, and I ought to know. You know, friend, that unless the different parts are thoroughly mixed, fertilizers only give partial results.

Now, friend, all you have to do is to order Harab Fertilizers by number. No. 1 is for potatoes, No. 5 for apples, No. 6 for wheat, and so on. Use them according to directions and I know the results—the bumper crops—will make you smile with satisfaction.

Yours for best results
Progressive Jones

The Harris Abattoir Co., Limited, Toronto, Canada



*Extract from an address.

MAPLE SYRUP MAKERS

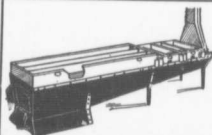
ENTER THIS CONTEST
\$500 IN GOLD
CASH PRIZES

Why not be a **WINNER** in this Contest?

We are giving away \$500 in Gold Cash Prizes to users of the Grimm "Champion" Evaporator.

Full particulars will be mailed on receipt of above coupon.

The competition will take place during the last two weeks of April, and the samples of syrup and sugar received will be placed on exhibit in the show windows of the "Montreal Star." Every purchaser and user of the Grimm "Champion" Evaporator may take part in this contest. Now is the time to properly equip yourself to make high grade syrup and sugar—high priced and therefore profitable. Do it now before the sap runs. State the number of trees you will tap and we will give you a price on a suitably sized outfit.



Address all enquiries to:

PRIZE CONTEST:
GRIMM MFG. CO., LIMITED
56-58 Wellington Street
MONTREAL.

(Don't Forget Coupon)

EGGS, BUTTER and POULTRY

For best results shop your live Poultry to us, also your Dressed Poultry, Fresh Dairy Butter and New Laid Eggs. Eggs cases and poultry crates supplied.

PROMPT RETURNS

Established 1854

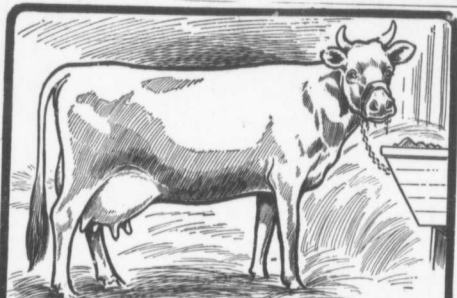
The **Wm. DAVIES** Co. Ltd.
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**MERCHANTS
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Butter Eggs Poultry Honey
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Our constantly growing trade demands
large supplies of choice farm products.
We need your Write for weekly
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57 Front St. E., Toronto
Established 1888



The Feed That Makes the Cream

Livingston's Oil Cake is the cheapest feed for cows—cheaper than corn, shorts or even hay. Because it actually increases the richness of cream—and also increases the amount of butter that you get out of the milk.

Test your cows before and after feeding Livingston's Oil Cake for a month—and you your "butter money" will show its economy.

Livingston's Oil Cakes contain from 8 to 15% of pure Lined Oil—are soft enough to break into small nuggets—and are completely and easily digested. Write us for sample and prices. If your dealer cannot supply you, Dominion Lined Oil Co., Limited, Boston, Toronto, Montreal.

Livingston's Dairy Oil Cake

HORTICULTURE

Garden and Orchard Notes

Plan next year's garden and orchard work.

Cut out and burn diseased or dead trees.

Cover the strawberries with about six inches of clean straw.

Tramp the snow about newly set trees to prevent mice finding a harbor under the crust and girdling them.

Mulch plum and other trees and shrubs with horse manure. Do not put closer than four inches from the tree.

Rotted barnyard manure may be spread over the lawn just before snow. It will help next year's grass crop.

Raspberries may be mulched with manure if they have not been laid down, but there is some danger of mice working under the manure.

Short courses and reading circles are being formed now to study horticulture and farm problems. Are you working in one or in your community?

Watch any palms or ferns that may be in the house for scale or mealy bugs. The plants should be washed frequently to keep the dust off and to prevent insects getting foothold.

Pay a fair price for your apple trees, but demand that they be true to name and well grown. If possible get a written guarantee and be sure the company will make the guarantee good if the trees are not true to name.

Cut scions of apples for winter pruning, grafting and spring sowing-work. Only this year's growth should be used. Store in sand or sawdust in a cool cellar.

Many of our large orchards, as well as small ones, do not receive the proper care to produce clean fruit. Either take care of the orchard or reduce the size so it can be made to produce good fruit.

Be careful where and of whom nursery stock is purchased. The gaudy catalogue and fluent agent are apt to give you the poorest of trees. Purchase from home nurseries or at least those near at hand who you know have a good reputation.

Are the apples stored for winter use full of worms? Now is a good time to study spraying methods and mixtures. Send to the nearest agricultural college for bulletins and information on the subject. Wormy apples may easily be prevented if precautions are taken to prevent them in the spring.

Varieties for Commercial Orchard

I have five acres of hard clay that I intend planting with apple trees next spring, and I want to have a commercial orchard containing two, or at the most, three varieties of winter apple. Will you kindly answer the following questions?
1. What three varieties would you plant?
2. Would the three you mention pollinize one another?
3. What distance apart would you plant the trees?
4. Would Stark be all right for fillers or could you advise a better?—W. L. Oxford Co., Ont.

I know of no better winter varieties of apples for your section than Spy, Baldwin, and Greening. These do excellently in your locality, and I would not think of planting others. I should prefer planting 40 feet apart. The Spy is a little later in blooming than the other two, but is usually in bloom at favorable time for cross-pollination with either of the others mentioned.

I would not use Stark as filler, it is rather a strong growing tree and not as well adapted to the purpose as

some other varieties. If you do not care to plant early varieties, such as Duchess, as fillers, I would recommend Wealthy or Wagner.

May I volunteer some advice regarding the method of arranging trees of different varieties in the orchard? Where each variety has a distinctive time of blooming, there will, of course, be a correct time for spraying that variety in combatting the codling moth. I observe that where varieties are set in solid rows, there is much less time lost in skipping trees with a spraying outfit than where the varieties grow alternately in the rows. I should therefore, suggest planting one or two rows of each variety and alternating the varieties, being careful to keep each variety in a distinct row.—Prof. J. W. Crow, Guelph, Ont.

Hardy Varieties Recommended

Will you kindly advise me of the best varieties of apples for market for North Simcoe county; also early and late pears? This variety in the North-West Greening for market? Is it not better than the Rhode Island Greening for keeping?—E. P. Simcoe Co., Ont.

I judge from your reference to Rhode Island Greening that you are not entirely satisfactory in your locality. You will probably have the same difficulty with Baldwin, as these two varieties are not particularly hardy in Northern sections. It is not, however, that you should be able to grow Northern Spy with fair satisfaction, but other than that variety, I can recommend no other winter apple. North-West Greening is hardy and the fruit is of good keeping quality. It is not, however, in demand on the market and would be suitable for home use only.

The best commercial varieties for your section, for as a grower, would be, in order of ripening, as follows: Duchess, Alexander, Snow, McIntosh, and probably Blenheim Pippin. This latter variety seems to be slightly harder than Baldwin and Greening, and might succeed with you.—Prof. J. W. Crow, O.A.C., Guelph.

The Function of Fertilizers

Prof. R. Harcourt, O.A.C., Guelph.

All plants require at least 10 elements in order that they may make full and normal growth. Fortunately, in some cases four, elements or in some cases four, elements to which we need pay special attention. Usually the soil and the air contain sufficient of all other elements to produce full and normal crops. The three which are so essential to a plant in sufficient quantities are: Nitrogen, potash and phosphoric acid. In some cases lime may also be deficient, but our experience would go to show that there are very few cases in Ontario soils where lime is absolutely needed.

The function of nitrogen is to produce large leaf and stem growth, and it is a prominent constituent of the protein material. Where there is an abundance of nitrogen we will usually have a deep green healthy looking plant. Too much nitrogen, however, will over-stimulate the growth of wood and leaf to the detriment of the production of fruit. Potash apparently has to do with the formation and transportation of carbohydrates, starch, sugars, etc., within the plant; consequently, in all plants producing large quantities of carbohydrates potash is required in considerable quantities, or in big, fleshy leaved plants we usually find that large quantities of this constituent is essential in producing the best results. Phosphoric acid has to do with the formation and transportation of the protein materials, so that it is said to follow the protein. Phosphoric acid seems to hasten maturity.—Extract from a address.

AD. TALK

LX.

How often it works out that impending disaster ultimately proves to be a blessing in disguise!

Less than 10 years ago the San Jose scale became introduced and threatened to destroy all fruit trees.

Oldtime sprays were ineffective against this insect, which in size was so small as to pass unnoticed to the untrained eye.

Because of its small powers of multiplying, its sucking mouth-parts, and its protecting scale, it was a most formidable foe to fruit growers. It could be killed only by a strong contact solution. Old-time spray solutions strong enough to kill this insect would kill the trees as well. Here was the dilemma!

Old timers prophesied the ruin and the end of fruit growing. But no! The various state experimental stations, with their college professors, horticulturists and Chemists, got busy. One of them, Professor Stewart, of Pennsylvania, evolved the lime-sulphur wash.

This spray has since worked the salvation of fruit growing. It has taken the Scale and also other scales and fungi, and, combined with arsenate of lead it has taken all insects as well in which it has been rightly applied.

With the evolution of lime-sulphur a new industry sprang into being—the business of making this spray flimsy. Commercial lime-sulphur was first made in the Western States about 10 years ago. Five years afterwards the Niagara companies, which had three factories in the West, established a factory in New York State. From here the first lime-sulphur was imported into Canada.

Canadian growers were quick to recognize the benefits of lime-sulphur; a large demand for it developed. Business men arose to care for it.

M. C. Smith, of Burlington, Ont., had been importing the material for two years. He was largely interested in fruit growing. He was also an apple buyer. He therefore was in a position to see how a Canadian Company could do a good business in this line. The result was he organized a company, purchased the trade marks and rights of the Niagara Sprays, and built a factory at Burlington.

So successful did this venture prove that he has since built another large factory at Kenilworth, N.S., and one at Trenton, Ont.

While the success of this business has grown out of supplying a great need it has come to supplying fruitation through Farm Paper advertising. "Mac" Smith, the manager, is a great believer in and an efficient practitioner of advertising. Moreover he can write good ads; you will be interested in watching for them.

He recognizes and takes advantage of the worth of Farm and Dairy. He advertises to "Our People".

Always seeking to serve his customers he thoughtfully added to his business a complete line of sprayers and accessories suitable and required for spraying the most difficult spray mixtures.

Now he has out a new product—a dry preparation of Soluble Sulphur. He will advertise this and his other lines as usual this year, and of course will use Farm and Dairy.

"A Paper Farmers' Swear By"

POULTRY YARD

Methods at the C. E. F.

Hopper feeding with dry dashes is the system of feeding in vogue at the Central Experiment Farm, Ottawa. This system reduces labor and gives good results. Mr. Gilbert, Poultry manager, believes, however, that a man may wish to resort to an increased egg yield, and he got to try this system. The difficulty encountered with wet dashes is that the moisture in the mash freezes very quickly in the open house.

Ground oats, shorts, cracked corn, and a small percentage of beef scraps makes up the hopper mash. In a separate compartment of the hopper crushed oyster shells are put for grit. The hens at the Central Experiment Farm are kept well littered, and in this whole wheat is used once a day. As much wheat as can be held in the hand turned in is fed to each fowl. Can anything be simpler than this method of feeding as practised at the C. E. F. Poultry Department.

To Improve the Average Flock

Jas. Nelson, Colchester Co., N. S.

Farmers generally don't believe in spending, or as some term it, wasting, much of their time on the poultry; but if they would only take as much interest in their fowls as they do in other live stock on the farm they would find that few branches of stock make any better returns. Poultry does not pay in many cases due to lack of attention and the keeping of mongrels instead of pure bred fowls. Progressive stock owners are disposing of all their scrub cows and horses and filling their farms with pedigreed stock. It is time the scrub poultry were got rid of too.

One breed is about as much as the average farmer can conveniently accommodate and attend to. The raising of a variety of breeds entails more time and trouble. Before choosing any particular breed it is well to consider which one will suit the conditions and requirements best. Having thought that out and come to a decision, go to a reliable breeder and procure some females with an unrelated male and prepare for the hatching season. Attend to them well during the winter and commence hatching as soon as the weather is at all favorable. Having given the breed chosen a fair trial and assuming that it gives satisfaction to you, as the advice would be stick to it and strive for improvement by careful selection and mating.

SELECTING BREEDING BIRDS.

About the end of the year go round the flock and select about a dozen of the best for the breeding pen. This gives us a better chance for grading up, and affords opportunity for closer observation, than if several points to be watched when mating up the breeding pen to produce strong healthy chickens that will develop into high-class poultry. Never inbreed, and when selecting the males always secure strong, vigorous individuals from a good laying strain. Don't use pullets if it can be avoided, as the result is generally a lot of weakly, slow maturing chickens; two-year-old hens mated to a vigorous young cockerel have always given me best results.

The trap net and egg record is a great help in building up a good laying strain, but the average farmer there is hardly time for this. If accepted, however, it well repays the time and trouble taken.

In striving for egg production never lose sight of the breed type and characteristics. Some poultry keep-

ers are quite regardless of these points. They seem to think that if they get a lot of eggs that it don't matter about the form or appearance of their fowls. But when they have stock to dispose of for breeding purposes they always find their mistake. Every fall the pullets should be rung so that when their second laying season is over and their days of profitable egg production ended, they can be disposed of while they are still of value for table use, except those wished to be retained for the breeding pen. Through negligence hens are often kept in some flocks up to five and six years; this means a serious hindrance to the poultry profits as by that time they are not paying for their keep and are practically valueless for marketing.

The Best Breed of All

Jas. Laughlin, York Co., Ont.

I have just given you a study of the Canadian Record of Performance and have been more than pleased to note that my favorite breed, the Jersey, has the highest average production of butter fat in three of the four classes. Many dairymen I know are inclined to let the Jersey as an inferior animal when it comes to making dollars and cents. Here is proof sufficient that the Jersey is not an inferior animal.

In the United States, I understand, there are more pure bred Jerseys than animals of all other dairy breeds combined. A circular recently issued by the American Jersey Cattle Club summarizes the production of 1,614 cows and heifers that have been tested and their average is 7,655 lbs. of milk and 407 lbs. of fat. One hundred and twenty cows five years old or over averaged 476 lbs. of fat. This, I believe, is a higher average than can be shown in any other breed. The best cow of fat, which on one year produced 952 lbs. of fat, which is 85 per cent. basis is equivalent to 1,121 lbs. of butter. Surely this is a record worth while.

When I sell milk I believe that I should prefer the Holstein. For cream shipper I believe the Jersey is

ROYAL PURPLE Stock & Poultry Specifics

FREE

We will send absolutely free, for the asking, postpaid, one of our

large 64-page books (with inserts) on the common diseases of stock and poultry. Tells how to feed all kinds of heavy and light horses, colts and mares, milk cows, calves and piglets, also how to keep and feed poultry so that they will lay as well in winter as in summer. It contains 350 recommendations from 100 of our people who have used our goods. No farmer should be without.

You can fatten cattle and hogs in a month's less time by using our Royal Purple Stock Specifics. Tells how to feed all kinds of heavy and light horses, colts and mares, milk cows, calves and piglets, also how to keep and feed poultry so that they will lay as well in winter as in summer. It contains 350 recommendations from 100 of our people who have used our goods. No farmer should be without.

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Progressive Farmers and Dairymen, Everywhere

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SHARPLES

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CREAM SEPARATORS

Many of them who formerly shipped their milk are now selling the cream and feeding the skimmed milk to the calves, pigs and chickens.

The high price of veal, pork and poultry pays them well to do this—and they're making more money than ever before.

They are successful, progressive men.

Here's a Letter from Maine:

Danforth, Me., March 12, 1912.
Am using No. 3 Sharples Separator. In 1910 milked eight cows and 8500 worth of butter and raised 3200 worth of calves and pigs on the skim milk. Haven't spent up to 1911, but returns were evenly as good.

Sharples Tubular Cream Separators make money and save time for you because they get all the cream, are easy to run, and can be cleaned THOROUGHLY in a few minutes. One of our customers wrote us the other day that his No. 4 Tubular in twelve years had not broken once or needed repairs. Some record, that—and work remembering when you buy a Cream Separator.

Isn

Warm Water for Your Cows Pays Big

Leading cattle men warm the water for their stock in winter.

It will pay you to get your cows to drink warm water and not have them shiver after drinking.

Heat the water right in your trough or tank with our **TANK HEATER**

Made of high grade iron and as here shown. Remains on bottom of tank without being fastened down. Takes on a uniform temperature. Will not crack. Weighs 150 lbs.; is 24 inches high (exclusive of pipe); 12 in. diameter. Ash pan and grate and basket fire pot are all heavy cast iron.

The heater will burn any kind of fuel: wood coal, corn cobs, rubbish, etc. Will last a life time. Price, only \$8.00. Order to-night and get full benefit this winter and get full benefit this winter and get full benefit this winter.

Catalogue of Tanks, Pumps, Windmills, etc., sent only on request.

THE HELLER-ALLER CO.
WINDSOR, ONT.



Sound Ideas on Feeding

H. H. Gee, *Haldimand Co., Ont.*

My pure bred Jersey cow, Sallie Mac, recently completed a yearly record of 13,049.85 lbs. of milk and 625.10 lbs. of fat, equivalent to 750 lbs. of butter. She made this record with very ordinary care.

My motto in feeding has always been "Study your cow." No two cows are alike in their make-up and no two cows can be fed the same if we wish to get best results. They may differ in disposition and temperament and the same feeds may act in a different manner on different cows. Hence the feeder must have an observant eye and good judgment.

I have tried almost every breed of dairy cattle and for the most economical production of butter fat give me the Jersey. There is a growing demand for Jerseys and I notice that those who have had them are never satisfied with anything else.

Insurance Act, and these people are liable to you for doing a business that they were not empowered to transact. The Superintendent of Insurance, when informed of this business, with commendable promptitude took action and asked for an explanation. This was given—that they were not aware that this was in violation of the Ontario Insurance Act. They have agreed in writing to not do any further business of this nature, and have notified all agents to cease selling these 'guarantees.' Any further transgressions will no doubt be severely dealt with by the department. You have right of action against the Dominion Lighting Rod Company, if they do not refund the money collected at once."

Capable Old Country DOMESTICS

Arriving every two weeks. Next parties about Dec. 17th and Jan. 14th. Apply now for January party.

The Guild, 71 Drummond St., Montreal and 47 Broke St., Toronto

Pratt's Animal Regulator

is the only stock conditioner which has stood the test of 40 years. Try it! It will increase the profits from your stock.
25c. 50c. \$1; 25-lb. pail \$3.50
"Your money back if it fails"
Almaanse PRATT at dealers, or
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BOOKS Now that the long evenings are here plan to improve your time
by reading. Get a Book Catalogue Free from
FARM AND DAIRY
All Books At Lowest Prices

Lightning Rod Insurance

In the issue of Toronto Saturday Night, July 13, appeared the following information that may be of interest to Farm and Dairy readers who have purchased lightning rods for their buildings accompanied by a guarantee of fire protection:

"The guarantee" of the Dominion Lighting Rod Company which you sent us is nothing but an insurance policy issued contrary to the Ontario

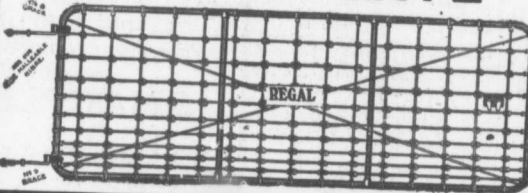
The Ontario Agricultural and Experimental Union will hold its annual meeting at the Ontario Agricultural College, Guelph, on the 7th and 8th of January next. The cooperative experimental work of the Union has been more extensive during the past year than at any previous time. In agriculture alone experiments were conducted on 5,027 farms in Ontario. These meetings are open to any one interested in Agriculture. Cheap rates have been arranged for on the certificate plan. For fuller particulars apply to the Secretary, C. A. Zavitz, Agricultural College, Guelph, Ont.

ASK YOUR NEIGHBOR—HE KNOWS

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Regal

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STEEL GATE



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in Ontario west of Toronto

12 x 4-foot Farm Gate.....\$4.00 15 x 4-foot Farm Gate.....\$4.25 14 x 4 foot Farm Gate.....\$4.50 5 x 4-foot Walk Gate.....\$5.00

Freight paid in lots of three gates or over, on orders received before February 1st, 1913

In Old Ontario, west of Toronto, list price; for freight in Old Ontario, east of Toronto, add 15c per gate; in New Ontario, add 50c per gate; in Quebec, add 50c per gate;

There is no other gate on the market with a brace that braces both the filling and the frame.

N.B. We Make Gates For Calf Barns, Stables and other special purposes. Write us describing what you need and get our rock-bottom, direct-from-factory-to-you price on your special requirements.

It would seem impossible for a factory to sell a gate of this description for the price we ask. It would be impossible for us to do but with our enormous capacity and our low farm method, we are in a position to do so. Our small profit, as per cent will see, is based on a very large volume of business, and it is necessary for us to sell enormous quantities of these gates to continue to sell them at the prices we quote.

We cannot guarantee this offer for any length of time. Send us your order to-day at this SPECIAL PRICE OFFER. Remit by Post Office Order, Money Order or Draft.

THE REGAL FENCE CO., LTD.,
SARNIA, ONTARIO

Manufacturers of
FAMOUS

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LAWN
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EATON'S SEMI-ANNUAL



SALE CATALOGUE

NOW'S YOUR CHANCE TO BUY BARGAINS

Not shopworn or surplus stock, but specially bought merchandise that you'll be glad to get so economically priced.

FORTY PAGES OF LOW PRICED MERCHANDISE

A little of almost everything. Just enough to make it interesting to all the family, and just such articles for the home as are useful and sure to be appreciated at such low prices.

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 For a copy of this Catalogue if you have not received one.



This is about the easiest way to keep down the high cost of living

OUR SPECIAL FREE DELIVERY

we will pay charges on shipments amounting to

\$10.00

or over, to Railway Stations in Ontario, Quebec and Maritime Provinces, on all orders received up to Feb 28th 1913 reserving the right to ship by either freight, express or mail.

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FASHION'S NEWEST FEATURES

You'll find new styles in women's wear and furnishings for the men folks, well designed and fashionably tailored.

JUST TWO MONTHS TO BUY AT SPECIAL PRICES

With so much that's new and serviceable to choose from you have also great saving in store—and don't forget our new \$10.00 Free Delivery Offer. Truly a grand climax to a notable selling event.

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Wondrously good values—a new \$10.00 Free Delivery Offer—Quick Service—and, back of all that, EATON'S Guarantee—Satisfaction guaranteed absolutely, or your money back. Can you afford to miss all this?

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FARM AND DAIRY

AND RURAL HOME

Published by the Rural Publishing Company, Limited.



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CIRCULATION STATEMENT.
The paid subscriptions to Farm and Dairy exceed 1400. The actual circulation of each issue, including copies of the paper sent subscribers who are but slightly in arrears, and sample copies, varies from 15,673 to 17,300 copies. No subscriptions are accepted for less than the full subscription rates.

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

OUR GUARANTEE

We guarantee that every advertiser in this issue is reliable. We are able to do this because the advertisements in Farm and Dairy are as carefully edited as the reading columns, and because to protect our readers we turn away all unscrupulous advertisers. Should any advertiser herein desire dishonestly with you as one of our paid advance subscribers, we will make good the amount of your loss, provided that the transaction occurs within one month from date of its publication. If it is reported to us within a week of its occurrence, and the facts be as so stated. It is a condition of this contract that we, the publishers, advise you state: "I saw your advertisement in Farm and Dairy."
Rogues will not do the trade at the expense of our subscribers, who are our friends, through the medium of these columns; but we shall not attempt to adjust trifling disputes between subscribers and honorable business men who advertise, nor pay the debts of honest bankrupts.

FARM AND DAIRY

PETERBORO, ONT.

THOSE IDLE HOURS

What are we going to do with our idle hours this winter? Now that the snow is on the ground and fall plowing, silo filling, corn husking and for the most part, threshing, at an end, we can afford to reduce pressure somewhat. Even on the dairy farm there will be more time on our hands than there has been for some months past. Are we going to read and plan, are we going to visit our friends, or are we going to put in our time in just plain "loafing?"

Calling on our friends is a first class way to put in time. We don't do enough of it. Family visiting is to be highly recommended. Also we deserve a little time to loaf after the hard work and long hours of the summer. But let us not forget that the profession of farming is one that requires much knowledge and thoughtful planning. In the rush of summer work we don't get much time for

either reading or planning, and we seem to get out of the habit of doing either. Spare hours this winter will give us the needed opportunity of adding to our knowledge and planning for the future. We are sure to reap big dividends on the time put in in this manner.

WHERE EDUCATION IS NEEDED

Over in the United States, farmers and farm papers are speculating as to who Woodrow Wilson will appoint to the position of Secretary of Agriculture. The present secretary, who has held this office under the Republican administration for sixteen years, is a strong man from the standpoint of production. Under his administration the United States Department of Agriculture has done much to disseminate agricultural information throughout the country. The researches of his subordinates along agricultural lines have brought much valuable information to light. The chief criticism of Secretary Wilson is that he has been neglected the selling end. He has been too prone to believe that all of the economic ills of the farmer will be ended when he learns to produce more economically. The attribute most desired in the new secretary, when he is appointed, is well summed up in a recent issue of The Nebraska Farmer as follows:

"The biggest problems in agriculture now are economic ones, and it would be a calamity to have a secretary of agriculture during the next four years who could see nothing but the production side."

What of the situation in Canada?

We believe that our Departments of Agriculture may be criticized for exactly the same failing as has drawn on Secretary Wilson the rebukes of the farm press of the United States. Here in Canada, it costs us almost as much to market our produce as does to produce it. We believe that our Departments of Agriculture, Dominion and Provincial, would do much more good by encouraging the formation of cooperative marketing societies and in disseminating information along marketing lines, than they will by devoting their chief energies to encouraging larger production. Education along production lines is all very well and we cannot get too much of it, provided it is well directed, but education on production, unless it is accompanied by information as to the marketing of what we produce, will do little to render farming more prosperous.

WHY THEY GO WEST

The importance of high land values as a factor in explaining why there are 100,000 less people in rural Ontario than there were 10 years ago, was well illustrated by a conversation overheard by an editor of Farm and Dairy at the recent Ontario Fruit Growers' Convention in Toronto.

"And where has Walt gone?" one farmer enquired of another, as they discussed the friends they had both known down in Oxford county.

"Oh, he has gone West," was the reply. "He was a hard working fellow, but you know he was a tenant and he said he couldn't pay the rent and still give a decent living to his wife and children. They say he's doing well out West."

"Walt," apparently a hard-working, self-respecting and ambitious citizen, had been driven out of Ontario by the same factor that is driving thousands of others out of Ontario—high land values. This little conversation with variations has probably been repeated in every blacksmith shop and cross roads grocery store in rural Ontario. With land values as high as they are in our best farming sections, it is next to impossible for the farmer with average knowledge and average ability to pay interest or rent as the case may be, pay for his hired help, the feed and fertilizer that he may buy, and then have enough left to pay himself a decent living wage. Is it any wonder that tenant farmers, farmers whose places are heavily mortgaged, and young men who are starting in without farms and with little capital, are flocking to the cheap lands of the West where all of their profits will not be absorbed by the landlord or mortgage holder?

THE NEIGHBOR'S SMILE

"Do you grow alfalfa?" we recently asked an Eastern Ontario dairyman.

"No," replied he, "I don't; but I would like to give it a trial. The trouble is that if I fail, the neighbors will have the laugh on me."

This is a reply characteristic of many that we hear when farmers are asked as to why they have not adopted progressive methods, which we know they favor. Too many would-be progressive farmers fear the scorn of their stand-pat neighbors, and rather than give them an opportunity to laugh at them, they toil along in the same deep rut as those around them.

We need to take council with our courage and not with our fear. Success does not come from thinking what our neighbors may say or do, but by making our conclusions carefully and then following them out resolutely. When Jas. Sangster down at Ormstown, Quebec, bought the first Holstein in the country, he was ridiculed on every hand. His neighbors now look back on him as one of the truly great men of their district. Jas. Rettie, in Oxford county, Ontario, bought Holsteins when a person who invested in black and whites was not considered right in the head. Oxford county is now known as one of the great Holstein centres of Canada. R. R. Ness got but little encouragement when he decided in favor of the Ayrshire, but he braved all ridicule, and to-day he is the best known and one of the most respected men in the Chateauguy district of Quebec, the greatest Ayrshire centre on the American continent. When W. H. Gibson, down on the Ontario Lake front, put in 20 acres of orchard, his father left the

farm, and his neighbors did their best to dissuade him from making such a foolish expenditure. Mr. Gilbert is now one of the largest apple growers in Ontario, his income runs into thousands of dollars a year, and the whole section is being devoted more and more to orcharding. We could cite many more instances that have come directly under our observation, in which men who, regardless of the smiles of their neighbors, followed out their convictions, and have come out on top.

There are many young men, and old men, too, who in the dawning of this new year of 1913, would like to branch out into some form of agriculture more remunerative and more interesting than the farming of their fathers; also there are almost sure to be some who, by their smiles, will endeavor to withhold the progressive ones from their good purpose. Let us remember in the carrying out of our New Year's resolutions that "the who laughs last laughs longest," and in the long run our neighbors will be following in line with us in our new venture.

The Evil of Land Speculation

Land speculation is one of the greatest hindrances to progress in Canada to-day. This is true in both East and West. In discussing Western problems in a recent issue of the Grain Growers' Guide, Mr. Geo. F. Chipman, the editor, gives the land question first consideration, placing it even ahead of the tariff. He writes: "The land question is one which affects with great seriousness every citizen of the Prairie Provinces. At the present time one land speculator, many of whom have fled from Canada, are putting in their pockets at a moderate estimate at least \$50,000,000 a year. It is nothing uncommon to meet a man in the Western cities who has made from \$250,000 to \$1,000,000 in the space of three or four years through land speculation. Thousands are doing it on a smaller scale, yet none of these speculators have given one dollar's worth of value in return for this vast sum of money.

"All of the value in the land was created by the presence of the people, and in proportion as the speculator pockets what he does not earn so the farmer and worker have to give what they are not allowed to pocket. The peculiar result of conditions is that in this country where millions of acres of virgin land lie idle there is a scarcity of land, and that there are millions of acres of unused land lying close to the railways, but a farmer who wishes to use this land is not permitted to do so until he has paid tribute to the 'dog in the manger' speculator.

"Every one can see the facts as set forth above, but not every one realizes to what an extent the land problem complicates every other problem in this country. Immigration is pouring into this country at an enormous rate. Thousands and tens of thousands of farmers and their families are forced to go from fifteen to a hundred miles from the railway to get cheap or free land when there is room and to spare to give each family plenty of land within ten or twelve miles of the railway lines. The hardship thus imposed upon the women and children on the frontier is often times desperate. Domestic help in such cases cannot be secured. There are no nurses in such places to assist at maternity, and

many a child is born on the frontier without the attendance of even a physician to protect either mother or child. There is a lack of educational facilities, and of the spiritual and social benefits of the church. Physical suffering must be endured because of the distance from medical or surgical aid.

"The land policy which permits speculators to hold land out of use until it rises in value results in sparsely settled communities all over the West, and the further the distance from towns and railroads the more acute the problem. It is the land policy that thus militates against better social environments. It is the land policy largely that prevents the building up of efficient and well-attended rural schools; it is the land policy which hinders cooperation among farmers in marketing and also in securing satisfactory agricultural credit. Anyone who will study the land question in the West will realize that it is a blight upon our Western civilization.

ALL MUST SUFFER

"Land speculation takes a heavy toll even from those living in towns and within a convenient distance of the railways, but the heaviest burden is felt by those living further away, just as in the cities by those who are driven to the outskirts to secure home in which to live. Many men who have profited through land speculation fully realize the evils of the system and are strong advocates for reform. Many of those who have made the most money, however, through land speculation, are the strongest defenders of the present system.

"The remedy for the land question is simply one of taxation. Taxes on vacant land should be made so heavy that no speculation could afford to hold it out of use. A graduated tax also on large holdings, would prevent the building up of large estates, such as is going on throughout the West to-day. The Creator made the land for the people, but by the assistance of barbarian laws the few are profiting at the expense of the many. Unless the land question is attacked seriously in the near future there is every likelihood that the landlord system which has proved such a curse in Great Britain will be transplanted in Western Canada and become a millstone about the necks of the Western people."

Clover Seed in Quebec

Last summer when travelling from Macdonald College to Montreal an editor of Farm and Dairy dropped in to conversation with a gentleman sitting near him in the car, and before Montreal was reached had secured some interesting data re the possibilities of clover seed production in Quebec province. The gentleman was R. W. Hodgins, a farmer from the Shawville district of Quebec province. One of the Government owned clover haulers had been in the Shawville district in a previous year, and the people were quick to see its advantages and bought one of their own.

"Last year (in 1911), about 18 farmers used the clover mill and found that there was good money in clover seed production. This is the largest number that have threshed clover seed in that district, so Mr. Hodgins informed us, since Mr. W. A. Hodgins had threshed his first crop of 400 lbs. some 11 years before. Some of the best crops secured in the district in 1911 were as follows: A. G. Murphy, 1,000 lbs.; L. W. Hodgins, 1,500 lbs.; Thos. Eades, 15 acres, 2,000 lbs.; F. Thomas, 1,000 lbs.; Geo. Barber, 600 lbs.; A. Davis, 500 lbs.; J. Sturgeon, 500 lbs.; L. & J. Outhbertson, 1,200

lbs.; Sly Bros., 500 lbs., and W. G. McDowell, 1,000 lbs.

"We sold our seed in 1911 for 20c a pound," said Mr. Hodgins, "and we were well satisfied with the results." Who says Quebec cannot produce its own clover seed?

The Milking Machine in U.S.

Canadian dairymen have testified to the value of machine milkers; in fact, we have yet to hear of anyone giving the machine a fair trial and being dissatisfied with it. But if we wish for great multiplicity of testimony we must go outside of Canada, as machines are a comparatively new idea in this country and the number of dairymen using them is limited. In the United States where the machine has been in use for a greater number of years there are hundreds of dairymen who do not know how they could get along without the assistance of the machine milker. In the State of Michigan, for instance, the first milker was installed on the farm of ex-Governor Fred M. Warner. A few weeks ago Mr. Warner's farm manager, P. C. Banfield, wrote as follows to D. H. Burrell, Comptroller of Little Falls, N.Y., whose milking machine they were using:

"We have just finished testing two cows for the O. R. C. One of them after being with the milker for six years, made a record of 54 lbs. milk in seven days, 25 lbs. butter. So you can see how the milking machine spoils a cow. I think this cow will do better than that the next time she comes in."

Mr. R. E. Reid, Chemung, Illinois, tells of his experience with the machine milker as follows:

"It is five years this month since I commenced using the machine, and it is all right. I have not used it this winter as it was so cold, but will start it in a few days. I know that I can milk 90 cows in one hour alone, for I have done it and got 850 pounds of milk a day. I would not be without the machine!"

Further testimony is given by E. L. Hoyt, Elburn, Illinois:

"As I have been a user of the milking machine for nearly five years I think it my duty to let others know what success I have had with them. I have milked 53 cows in an hour and a half with the help of my 12-year-old boy, and do it with ease. I believe in stripping the cows after the machines. I am safe in saying that my machines have paid for themselves twice over every year, that is, in saving of hired help. I will recommend them to any good reliable dairyman."

"I have some cows that have been giving from 90 to 116 lbs. of milk a day, hence the need of a divided pail to hold 50 lbs. on each side," writes Geo. R. Smith, Osce, Illinois. "I think it would be well to send me one 70 lb. pail also." Mr. Smith started his machines in March, 1908. The majority of his cows were heifers, and these same cows he is milking to-day.

Coming Events

Eastern Ontario Dairymen's Convention at Kingston, Jan. 8-9, 1913
Eastern Ontario Winter Fair, Ottawa, Jan. 13 to 18, 1913.

Western Ontario Dairymen's Convention at Woodstock, Jan. 15-16, 1913.

Ontario Corn Growers' Convention and Exhibition, Windsor, Ont., Feb. 4, 1913.

Manitok Winter Fair, Brandon, March 3, 1913.

Those who pasture their clover meadows too close this fall will have good cause to regret it before hay-making next summer.

DE LAVAL

CREAM SEPARATORS

There's no good reason why you should wait till spring before getting one

On the contrary you may buy a DE LAVAL NOW and save half its cost by spring. Moreover, if you can't conveniently pay cash you can buy a DE LAVAL machine on such liberal terms that it will actually pay for itself.

As to your NEED of a separator, if you have the milk of even a single cow to cream you are wasting quantity and quality of product every day you go without one. This waste is usually greatest in cold weather and with cows old in lactation, and it counts most, of course, when butter prices are high. Then with a separator there is always the sweet warm skimmilk, and saving of time and labor, in addition.

When it comes to a choice of separators DE LAVAL superiority is now universally recognized. Those who "know" replace the other separator with a DE LAVAL later—thousands of users do that every year. If you already have some other machine the sooner you exchange it for a DE LAVAL the better.

Why not start 1913 right in dairying? SEE and TRY a DE LAVAL NOW when you have plenty of time to investigate thoroughly. The nearest DE LAVAL agent will be glad to set up a machine for you and give you a free trial of it.

DE LAVAL DAIRY SUPPLY CO., LIMITED

173 WILLIAM ST., MONTREAL

128 JAMES ST., WINNIPEG



Milks Four Cows in Five Minutes

Think of that Mr. Dairyman, almost a cow a minute and everyone milked thoroughly, gently and without any possible chance of injury to even the most sensitive animal. Stop and figure how long it takes to do your milking, now and what it is costing you. Then compare the low cost of installing and operating a

Sharples Mechanical Milker

the independence it gives you from shiftless unreliable workmen, the freedom from worry and drudgery, the assurance of perfectly clean milk—free from stable air and bacteria, and last but not least, the opportunity to double the size of your herd. Consider all these advantages and you will understand why Mr. Henry Fielden, Supt. of the famous Branford Farms, Grotton, Conn., says: "It is one of the most profitable investments we have ever made on this farm." The Sharples Mechanical Milker is the only machine using the patented

"Teat Cup with the Upward Squeeze"

The Sharples milking machine thus presses the blood back up into circulation after each stroke, preventing fever, swelling and congestion. This one great improvement marks the difference between the success and failure of mechanical milkers. It removes the last possible objection to the mechanical milker and explains why it is used by the world's highest priced dairy cows. We will make you a proposition that guarantees satisfaction to you in your own dairy or on sale. Write for Circulars and Catalogues today.

THE SHARPLES SEPARATOR CO.

TORONTO, ONT. WINNIPEG, MAN.

CALVES

Soon Eat
Their Heads Off

WHEN YOU FEED THEM
ON NEW WHOLE MILK!

Save Money

And economize greatly on the milk and raise healthy, thrifty, vigorous calves at the lowest possible cost, by feeding

CALFINE

THE STOCKMEN'S FRIEND
(Made in Canada)

When buying Calfine you get a Canadian product, pure, wholesome and nutritious, and have no duty to pay.

Get a trial bag of Calfine. Your dealer has it, or if not, send \$2.75 to us and we will ship you 100 lbs. of Calfine as a trial, and we will pay the freight to any station in Ontario, South and East of Sudbury.

Send to-night for your trial order of Calfine, and use it on your fall calves. They will thrive on it in a way that will surprise you.

Calfine will save you money

CANADIAN CEREAL AND
MILLING CO., LIMITED
Toronto, Ontario

WANTED—A CHEESE MAKER

By the Northport Cheese and Butter Co. for the season of 1913 to make by the cut, and furnish his own help. State experience and give credentials. Applications received up to Jan. 14th, 1913.

D. H. FRASER, Secretary, Northport, Ont.

CALVES RAISE THEM WITHOUT MILK
Booklet Free.
Stein, Briggs Seed Co., Ltd., Toronto, Ont.

BUTTER! BUTTER!! BUTTER!!!

Why make butter during the winter months when you can ship your cream weekly, and get the highest market price? If within one hundred miles of London we can guarantee you, for your butter-fat for December, at least 30c per pound F. O. B. your nearest express office, and supply cans for shipment (4, 8 or 10 gallon to suit your requirements). We remit immediately each shipment is tested. A post-card will bring a can (specify size suitable) and enable you to give this system a fair trial.

SILVERWOODS, LTD.
Successors to Flavell-Silverwoods, Ltd.
LONDON, ONTARIO

Roofing

Free Samples
Free Catalogues
Free Plans

No matter what kind of a building you intend roofing, you should know about Galt Steel Shingles before you decide on the material. A post card, bearing just the one word "Roofing," together with your name and address, will bring free of charge, important roofing information. The Galt Metal Co. 253 Stone Road Galt, Ontario.

Creamery Department

Butter makers are invited to send contributions to this department, to ask questions on matters relating to butter making and to suggest suitable for discussion. Write letters to Creamery Department.

Value of a Pound of Butter

By H. R. Wright

The other day I met a fellow who was mad. He said his grocer had asked him to pay 40c for a pound of butter and he'd be blankety blanked if he did it, because the price was outrageous; and furthermore he had heard that a large manufacturer of butter had said that butter never ought to go above 30c a pound, anyway.

I tried to jolly him a little about that large manufacturer of butter and found out that the man in question was not only large physically, but manufactured a large amount of butter. Then I got to thinking seriously about what a pound of butter really might be worth.

Of course, everybody knows, and the writer is no exception, that the high price of butter in the winter time caused, in a general way, by its scarcity, and everybody knows that the law of supply and demand runs in the long run fix the money price of this staple food; but it occurred to me that it might be wise to see whether from a food standpoint one could really afford to pay 40c a pound for butter.

WHAT FOODS ARE FOR

Foods, whether for man or beast, serve one of two purposes, either to repair the waste of the body—that is, to furnish construction material to rebuild the body from day to day; or furnish the motive power for the activities of the body. It is perfectly well known that one food or a complete food in itself. No one food can furnish both the construction materials and the motive power in just the right proportions, so that, even if it is discovered that one food can be bought for less money than another it does not at all follow that we shall be able to use the single cheapest food and so economize to the greatest degree possible.

It's a human fashion, founded upon this truth, to eat a variety of foods, so that for purposes of comparison we may ignore this fact and find the food value of each food and then compare, even if it is a fact that neither is a full substitute for the other. In the processes of digestion, exactly the same chemical change takes place as when a substance burns, and in both cases heat and energy are produced. It is, therefore, possible to estimate the food value by the amount of latent heat contained in the article of food considered. The unit of measurement is called a calorie.

The government standard of the possible energy of good nutrients is as follows: One pound of protein yields 1,514 calories. One pound of fat yields 4,037 calories. One pound of carbohydrates yields 1,315 calories. The number of calories of food value required for a day's food is about 3,800.

VALUE OF DIFFERENT FOODS

Having thus set forth what the wise men have given us as a proper unit of measurement of food values, we have only to get their statements of food values in calories to enable us to determine the respective monetary values based on the present economy, leaving out palatability, suitability and a good many other things that we may discuss later. A recent government bulletin, whose authority is unquestioned, gives the following food values for a number of the most usual foods:

Milk, 310 calories per pound; skim-milk, 165; cheese, 1,950; eggs, 700; dozen eggs, 1,050; pork chops, 1,850; beef steak, 1,130; smoked ham, 1,940; bacon, 3,530; oysters, 235; fresh fish, 325; oat bread, 415; white bread, macaroni, cooked, 415; white bread, 1,215; corn bread, 1,205; sugar, 1,860; potatoes, 85; celery, 85; onions, 225; olive oil, 4,080; lard, 4,080; butter, 3,410.

From this authentic table it appears that butter compares very favorably with a good many other very common foods. We consider their relative food values in connection with their well known prices. This is leaving out of account everything but strict economy of purchase, and the absolute value of the food in calories.

If we pay 40c a pound for butter, we must, if we are strictly economical, get the same number of calories of food value for our 40c when we expend it for other foods. To do so we must get for 40c approximately 11 pints, 5½ quarts of milk at 7.37c; 3 pounds of beef steak at 14.2c; 2¼ pounds pork chops or other similar pork at 16.8c; 10 pounds of fresh fish at 4.14c; 3 dozen eggs at 12.9c; 7 quarts of oysters at 8c.

COMPARISON FAVORABLE TO BUTTER
Some of these prices are ridiculous, and not one of them is easy to secure in the city and town markets. Prices in my own city are such that one could, with food economy, pay some extraordinary prices for butter. Take a look at some possibilities based upon what our people actually pay for some foods:

Milk at 10c per quart equals butter at 55c.

Beefsteak at 18 to 25c equals butter at 45 to 75c.

Fresh fish at 10 to 20c equals butter at \$1 to \$2.

Pork at 18 to 20c equals butter at 45 to 50c.

Eggs at 25 to 35c equals butter at 75c to \$1.05.

It is therefore apparent that in comparison with these well known universally used foods, butter is an economical food at 40c a pound.

A further comparison that are cheaper value of butter with the food value of the vegetables and with bread, also with olive oil and lard, show that per calorie food value may be obtained in those products much less than in butter. For example, and per calorie than butter, but one will hardly buy lard to spread upon his bread for that reason. A pound of sugar has as many calories of food value as a pound of smoked ham or a pound of cheese or a dozen and a half of eggs or a half a pound of butter, and may always be bought for much less money, but it does not therefore, from a practical standpoint, take the place of either the ham or the eggs or the cheese or the butter.

The reason why people do not live freely bread alone, but demand both bread and butter, is the universal fact that the appetite craves and the body needs require both. Potatoes at 40c a bushel cost one-seventh as much as butter, but that price per pound, but that don't enable us to live upon potatoes alone. But pork chops and beefsteak and eggs and milk and fish can and do take the place of butter, but very greatly to the disadvantage of the purchaser's pocket book, if we consider present prices.—Creamery Journal.

We keep a dairy book, in which we make entries of all butter sold, name of purchaser, and price received. Then we know how you stand at the end of the year—E. C.

See your friends about subscribing to Farm and Dairy.

Send your Raw FURS to John Hallam

Sixty Thousand trappers send us their Raw Furs. Why not you? We pay highest prices and express charges. Shippers in country send us 100 lbs. of furs are received. Millions of dollars and 100,000 trappers send us 100 lbs. of furs. We are the largest in the world.

FREE Our "Up to the minute" and "complete" book of HALLAM'S TRAPPERS' GUIDE, a book of 90 pages, mailed FREE. Write to-day to John Hallam, Mail Dept., 33, TORONTO, 111 Front St. E.

EASTERN ONTARIO

Live Stock

AND

Poultry Show

Will be held at

OTTAWA

Jan. 14th to 17th, 1913

Increased Prizes and Classes

for

HORSES, DAIRY AND BEEF CATTLE
SHEEP, SWINE, SEEDS AND POULTRY

\$12,000.00 IN PRIZES

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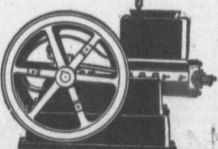
Will be given by prominent men on subjects relating to the various Live Stock Classes, also Seeds, Poultry and Field Crops.

Single Fare Rates on All Railroads.
For programme of judging and lectures apply to Secretary.

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GILSON ENGINE GOES LIKE SIXTY



Anybody can operate the simple "GOES LIKE SIXTY" Engine. Ready for work the moment you get it. Built strong and solid to last a lifetime. Will give long unflinching satisfaction. Gas, gasoline or kerosene can be used for fuel. Gilson's quality gives full value for your money. Economy and perfect satisfaction; freedom from trouble, delays and expense.

Every engine absolutely guaranteed. You can try this engine on your own risk before settling for it. (No take back charges.)

The "GOES LIKE SIXTY" has an engine for every purpose. All styles and sizes from 1 to 40 hp. Write for catalogue.

GILSON MANUFACTURING CO., LIMITED
96 York Street, GUELPH, ONT.

HE'S GLAD HE READ THAT ADVERTISEMENT

Telling how Douglas' Egyptian Liniment Cures Chilblains

Mr. Wm. Boulter, of West Colindale, N. S., tells how he was cured from an advertisement the way to cure chilblains.

"For some winters past I suffered from chilblains, but last winter they were so bad I was unable to wear my boots. After seeing the letter from Mr. McFarlane, that Douglas' Egyptian Liniment had cured him of chilblains, I decided to try a bottle of it. I wrote at once for sample which I received by return mail and before I had used half of the sample I found relief, and was soon able to put on my shoes. I have great faith in Egyptian Liniment and honestly believe it will cure my feet."

If you or any of your friends suffer from chilblains, see to it that this advertisement brings about the same happy results as did to one Mr. Boulter.

Douglas' Egyptian Liniment can be had at any dealer's for 25c. Free sample on request. Douglas & Co., Nanpano, Ont.

Situations Wanted

Experienced Farm Hands and Married Couples require positions. Send full particulars with stamped addressed envelope for quick reply.

FARM EMPLOYMENT AGENCY
140 Victoria Street, TORONTO



SYNOPSIS OF DOMINION LAND REGULATIONS

Any person who is the sole head of a family or any male over 18 years old, may homestead a quarter section of available Dominion land in Manitoba, Saskatchewan, or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any agency, on certain conditions by father, mother, son, daughter, brother, sister, or sister-in-law.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 10 acres, or on a city or town lot. In certain districts homesteader in good standing may pre-empt a quarter section alongside his homestead. Price, \$1.00 per acre.

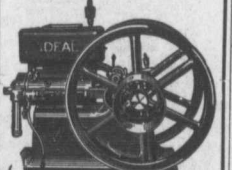
Duties—Must reside upon the home stead or pre-empt six months in each of six years from date of homesteaded entry (including the time required to earn homestead status) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price, \$1.00 per acre. Duties.—Must reside six months in each of three years, cultivate fifty acres and erect a house.

W. W. O'RY,
Deputy of the Minister of the Interior.
N.B.—Unauthorized publication of this advertisement will not be paid for.

GASOLINE ENGINES

1 1/2 to 50 H.P.
Stationary Mounted and Tractor



WINDMILLS
Grain Grinders, Water Boxes, Steel Saw Frames, Pumps, Tanks, Etc.
GOOD, SHAPLEY & MUIR CO., LTD.
Brandon Winnipeg Calgary

Cheese Department

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

What the Dealers Say

Dealers in cheese and butter are just as interested as are any of us in the progress of the dairy industry. If dairy farmers produce more milk, cream and our factory men make more cheese and butter and of better quality, it all means more business and better business for the big producer dealers in Montreal. Following is what a couple of them have to say as to the advisability of holding a Dairy Exhibit in connection with the Convention of the Eastern Ontario Dairy-union of the East:

"It would be wise to advocate a Dairy Show at the E. O. D. A. Convention. I would, however, add to it an exhibit of packages, also salt, parchment paper, cheese larding and all the apparatus pertaining to the making of cheese and butter." — A. A. Ayer, Montreal, Que.

"It could not help but be of benefit to have an exhibit of cheese and butter at the convention of the E. O. D. A., providing, of course, that you have able competent judges who are also capable of speaking to the makers assembled upon the exhibits and who can point out faults and how to avoid them. It is difficult to give an opinion on whether this would justify the expense, as I do not know what it would amount to. The opinion of Mr. Pauline would be valuable in this connection. There are marked differences on the average between western and eastern Ontario cheese, in favor of the former; but, of course, I could not say whether that is to any extent to be attributed to the influence of the Dairy Show." — P. W. McLagan, Montreal, Que.

Mr. Waddell's Testimony

W. Waddell, Middlesex Co., Ont.
We consider that the exhibit of cheese and butter in connection with the convention of the W. O. D. A. has helped to increase the attendance and has increased the membership. This exhibit has been most instructive to the makers, in showing them the kind of cheese and butter that is considered finest by expert judges. It has been especially valuable in teaching the makers what are considered defects in cheese and butter. The result of this instruction has been a great tendency on the part of makers to strive to excel not only at the exhibition but throughout the season. Our exhibit has also been an object lesson to the citizens of the towns and vicinity where the conventions have been held, and assisted materially in advertising our meetings.

A Maker's Opinion

Jno. Hall, Prince Edward Co., Ont.
An exhibit of cheese and butter at the annual meetings of the E. O. D. A. would be a splendid thing. It would show the workmanship and quality of the products that are being made from year to year, and which go to the British market. It would give the experts what are their chance to see and know if we are making the right goods for the trade. They could let us know if there was anything that we could do to improve the quality. And we would have a greater chance to learn. The exhibit of cheese from the Old Country at a previous meeting of the E. O. D. A. was fine. I learned much from it in

regard to just what we need in a shipping cheese.

My suggestion would be to get cheese-makers, either to have a cheese show from different factories; have both white and colored with all information as to when they were made and how, so that any question that might be asked could be answered by each maker. It would make the meeting very interesting. It is very nice to talk about what is being done and what we should do, but if we have good speakers our instructors will know if we are doing the work to the best advantage. My cheese have been going to one man in England for the last three years, and have proved satisfactory both in quality and finish. I am still grasping for something better.

An Education for All

J. J. Hogan, Peterboro Co., Ont.
Shall we hold an exhibit of cheese and butter at the E. O. D. A., as is done in the west? It would have a tendency to bring out more cheese and butter makers, also patrons and proprietors of factories. It would be a great education to makers and all persons interested in the dairy business. We would see where our cheese and butter are deficient.

I would suggest that anyone competing in this exhibit take the temperature of the milk or cream as it was received, per cent. of butter fat, amount of acidity, amount and per cent. of pure culture used, with acid weather and pasture conditions, as all of these have an effect on our standard in the manufacture of cheese and butter. It could easily be pointed out where we could improve.

What Other Makers Say

Before the next issue of Farm and Dairy is in the hands of our readers, the E. O. D. A. will be in session. What will they say regarding the advisability of holding a Dairy Exhibit in connection with the convention? Following is what some of our best known cheese makers would say were they given the opportunity:

"Having an exhibit of cheese and butter at the E. O. D. A. would be a good idea." — William Hadrell, Hastings Co., Ont.

"It would be a good idea. Such an exhibit would bring together the best makers of the eastern part of Ontario. I think it would be well to exhibit the cheese of three different months, say, June, August and September. Will as judges. I think J. A. Ferguson, Leeds Co., Ont."

"With regard to holding an exhibit of cheese and butter in connection with the annual convention of the Eastern Ontario Dairy-men's Association, I think the idea is a good one, and should be acted upon. The fall fairs in a great many places give little encouragement in the way of prizes, and as the public interest is dying for want of encouragement. Occasionally makers cannot be induced to exhibit owing to local men being engaged as judges. By having this proposed Eastern Ontario exhibition we could get away from all these unpleasant features.

"As to prizes, I think it would be advisable to follow along the lines of our western friends. How would you do to make the exhibit entirely eastern? It would confine the interest to the makers of the east, and the past have taken the bulk of the prizes, and by confining this exhibit to eastern Ontario I think it would help along the west and butter industry of the east, which to my mind is behind the west." — Arden E. Kings, Lanark Co., Ont.

ABSORBINE STOPS LAMENESS
From a Bone Sprain, Ring Bone, Splint, Curb or any other ailment of the horse, Absorbine will cure. It will cure all lamenesses of the horse, whether it be from a bone sprain, ring bone, splint, curb, or any other ailment of the horse. It will cure all lamenesses of the horse, whether it be from a bone sprain, ring bone, splint, curb, or any other ailment of the horse. It will cure all lamenesses of the horse, whether it be from a bone sprain, ring bone, splint, curb, or any other ailment of the horse.

CRUMB'S IMPROVED WARRIOR STANCHION



The standard of stanchions and convenience for care of a horse. Dr. Geo. Head of Hunt's Veterinary writes: "I have been very much impressed with the practical qualities of Warrior Stanchions."

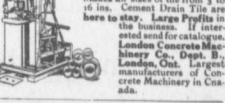
WINTER TERM FROM JAN. 2nd, 1913 ELLIOTT Business College

Geo. Veasey and Alexander St. Toronto, Ont. Canada's Highest Commercial School. Highly recommended by former students. Graduates in strong demand. Price for Year Catalogue

CHEESE FACTORY FOR SALE

One of the best locations in Western Ontario. Output of 1 1/2 tons. Immediate possession. For full particulars, apply to Box 60, Farm and Dairy.

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Makes all sizes of the from 1 to 16. Cement Brick Tile are here to stay. Large Profit in the business. If interested, write for catalogue. London Concrete Machinery Co., Dept. B., London, Ont. Largest manufacturers of Concrete Machinery in Canada.

YOUNG MEN WANTED to learn VETERINARY profession. Catalogue free. Grand Rapids Veterinary College, Dep. 16, Grand Rapids, Mich.

Kingston.

Wednesday, Thursday and Friday January 8th, 9th and 10th, 1913

This will be the Place and Date of Meeting for the

Thirty-sixth Annual Convention of the Eastern Ontario Dairy-men's Association

This Convention will give you much of information by Recognized Authorities. Plan to come and profit from what you will learn at the Convention. Bring your boys.

Farmers' Day, Jan. 8th Cheese & Butter Makers' Day, Jan. 9th

Special Railroad Rates. Write the Secretary for Programs and full particulars. Meet with the other "boys" at the Convention this year!

G. A. GILLESPIE, Secretary, Peterboro, Ontario.
T. A. THOMPSON, Almonte, Ont.



COUNTRY life has become monotonous, narrow and mean, only as it has concerned itself exclusively with its local problems.—Rev. Matthew Brown McNutt.

The Adopting of Kezzy

By Susan Hubbard Martin

"THERE'S only one thing worse than being ugly, and that's being an orphan," whispered Kezzy, disconsolately; "but when you're both, it's something just awful."

She gave the brown ribbon that tied back her short, black locks an extra twist as she spoke.

"I wish it was wider," she added, regretfully. "I might look a little better if I could have wider hair ribbons and not brown ones. But it ain't any use to wish. I'll always be ugly, and I'll always be an orphan. Nobody ever, ever'll adopt me." And then two large tears trickled slowly down Kezzy's sallow cheeks.

At that very moment a little girl about her own age burst into the room. A little girl she was with golden hair that had a tendency to curl, large blue eyes, pink cheeks and dimples.

"Kezzy, Kezzy!" she cried. "I'm adopted—I really am! A rich lady came this mornin', and she's told Mr. Pickett to get my things ready right away. I'm going South to live, and oh, Kezzy, I'm to have a beautiful little pony all my own, and a doll as big as I want it. The rich lady said so. And my name's to be Dorothea Alicia Campion, after her little girl who died."

Kezzy's eyes filled with sudden tears.

"Of course, you would be adopted, Patty," she said, gently. "You've got such pink cheeks and such blue eyes and such beautiful hair. It don't make any difference whether your hair ribbons are wide or not. You look pretty in anything, even blue calico. She put her arm affectionately about Patty's neck.

"Nobody ever'll adopt me," she added, with a break in her voice. "I don't see why if I had to be an orphan, I had to be ugly, too. I'd like a home," she went on, "a real home with things in it. I'd like to have pictures on the wall, and some books, and oh, Patty, I'd like, better than anything in the world, to have a room with a dear little dresser in it, with drawers, and in the drawers I'd have hair ribbons—wide ones—of all colors, and nice handkerchiefs and turnovers. And I'd like plants in the windows of my home, and I'd like a cat, and I'd like to go out and gather the eggs and pick berries and help in the garden."

Patty looked at her meditatively. "I guess you'd like a farm, Kezzy, better than anything, if you like eggs and chickens and all that. Don't look so sad honey; maybe, after all, somebody'll adopt you."

But Kezzy shook her head. "Ugly folks have no chance," she said soberly. "Least, not in orphan asylums."

But in the mail the very next day, Mr. Amos Pickett, who was at the

head of this particular Orphans' Home, received a letter.

"Dear Sir," it ran, "Of course, you don't know me, but I heard you tell about your Orphans' Home at a meeting last spring in my own town. You came here to attend a convention, you remember. I've been interested in orphans ever since. New I have a



The Home of an Eastern Reader of Farm and Dairy

Big clapboarded houses, such as the one here illustrated, the home of S. B. Wright, Victoria Co., N. B., are the characteristic farm homes in the Maritime provinces. Lumber there is cheaper than is brick, and it is seldom that a brick or stone house is seen in the farming country. Notice the rural mail delivery box in the foreground.

large, well-stocked farm, and I'm quite alone in the world, with more money than I need. I've never married, been too busy, and never expect to now—but I have a motherly feeling in my heart just the same as own mothers have. And it's been lornie in upon me, ever since I heard you speak, that I ought in that way, something for a little girl in that way, and that I would be pleasing the Lord very much if I took one of his little orphaned ones. Now I may be what some people call peculiar. I suppose I am, but I don't want any of your pretty children. If you have a plain, ugly little girl whom nobody wants, you send her to me. As to the matter of expense, I'll pay everything, and be making out the papers I'll leave to you. But I want her for my own and for all time. Please let me hear from you at once. With best wishes, I remain,

"Yours respectfully,

"Martha Emmeline Warner.

"P. S.—You need not be afraid. I was an ugly little girl myself."

"M. E. W."

Mr. Pickett read the letter through, then he smiled, well pleased. He thought at once of the little girl in because she was so ugly. He coughed a bell by his side.

"Send me Kezzy Snow," he said to the attendant who answered it.

As the train stopped at the little Western town that autumn night, a small girl alighted. She was dark and plain with irregular features, and straight; black locks tied with brown hair ribbons. But the eyes were frank and honest, and the mouth, if a trifle wide, was sweet and firm and further adorned by two rows of very pretty, even teeth. The e wasn't any weakness in the lines of Kezzy's mouth. She got off the train with her suitcase, and stood still, looking about. But at that very moment a large, stout woman, with very pleasant eyes and a brisk, business-like manner, came up to her.

"This is Kezzy, I am sure," she said, with a smile.

The little girl looked at her.

"Yes'm," she answered, shyly.

"You're Miss Warner, arn't you—the lady who is going to adopt me?"

Martha Warner smiled, well pleased, and looked with keen eyes into the small, plainly anxious face.

Kezzy shrank back a little.

"Please don't think I'm too ugly," she whispered. "Oh, I was most afraid to come, because—her voice

with a cshion, and a whole shelf of books.

Kezzy peeped at the titles delightfully. There were the "Elastic" books and some of Miss Alcott's, and one or two of Mrs. Whitney's, besides some others she had never heard of. But they all had very interesting, she thought; and then she opened timidly the first drawer of her dresser. As if her now-found friend knew all about the fondness for wide ribbons, there they were, a great many of them, and in all the beautiful colors she had longed for. And there were some dear little turnovers, too, a pile of dainty handkerchiefs, and—could it really be!—a lovely, little red pocketbook.

At the sight of that, Kezzy got right down on her knees.

"Dear Lord," she whispered, "I'm glad you made me ugly, after all, because if you hadn't, Miss Martha Warner wouldn't ever wanted to adopt me, and I'd rather be her little girl than anybody else in the world, and I'm going to be as good as I can be. And I know you'll help me to pay Miss Martha back, won't you?"

Not far from Kezzy's room sat Martha's chamber. The memory of that cold, little hand, the wistful, plain little face was with her yet. She would do her best by the child. She could see already how much she was going to love her.

"Dear Lord, help me," she whispered, "to make her happy."

To ugly little Kezzy in that somewhat dreary Orphans' Home, the light of love had come, and in it she blossomed and ripened and grew—not ugly—out beautiful.

Watch Yourself go By!

Just stand aside and watch yourself go by;

Think of yourself as "he" instead

of "I";

Watch closely, as in other men you note

The bag-kneed trousers and the seedy coat;

Pick flaws, find fault, forget the man is you,

And try to make your estimate ring true,

Confront yourself and look you in the eye,

Just stand aside, and watch yourself go by.

Interpret all your motives just as though

You looked on one whose aims you did not know.

Let undisguised contempt surge through you when

You see you shirk, O commonest of men—

Despise your cowardice; condemn what'er

You note of falseness in you anywhere.

Defend not one defect that shames your eye—

Just stand aside and watch yourself go by.

And then—with eyes unveiling to what you loathe—

To sins that with sweet charity you'd clothe

Back to your self-walled tenement you'll go

With tolerance for all who dwell below.

The faults of others then will dwarf and shrink.

Love's chain grow stronger by one mighty link—

When you, with "he" as substitute for "I,"

Have stood aside and watched yourself go by.

—From Triumph Chronicle.

A mortar of pure cement rubbed

into cracks is a good way to stop

leaks in wooden troughs.

broke—"because no one ever wanted to adopt me before. I'm ugly, know, but I'll look better when I get rested and don't have to wear brown hair ribbons."

"Bless the child!" cried Martha Warner, under her breath.

Then she took hold of the cold, little hand that somehow sent a thrill to her lonely heart.

"Don't you mind about your locks," she said, heartily. "I'll come out all right. Why, if you had been pretty, I wouldn't ever have wanted to adopt you. Didn't you know that? I was an ugly little girl myself, Kezzy, and that's why I wanted you. I want to make up to you for every heartache I suffered myself. The Lord made you Kezzy, and he made a place for you, too, and it's right here in my heart."

And then Martha Warner did a strange thing. She bent down and kissed tenderly the little sallow cheek

That night, as Kezzy, after a bountiful supper, looked about the clean, little room, that was henceforth to be her own, she gave a sigh of deep joy. The bed—a low, brass one—was so plump and white, and the pillow slips were even edged with lace. Kezzy liked that. And there was a lovely dresser with a white birch-ushion on it, a plump, blue pin-cushion and three roomy drawers. Beside these there was a dear little rocking-chair

The Upward Look

Gladness—Our Duty

Rejoice in the Lord always; and again I say, rejoice.—Phil. 4:4.

Paul wrote this letter to the Philippians while he was a prisoner in Rome. He speaks of his bonds and knows that he may suffer death at any time, but this does not cause him to complain. In fact, the more he is called upon to suffer for the Master's sake, the more joyful does he become. If death should come, he will go to be with his Heavenly Father, and if he is allowed to live he will be able to help some of his brethren in the flesh. Even while in prison Paul was helping those around him; he was enabled to tell the soldiers who were chained to him about his Master. His example inspired other weaker Christians "to speak the word without fear." The keynote of this letter of Paul's to the Philippians was "rejoice." Although this letter has but four chapters the words "joy" and "rejoice" are used about 15 times.

The great secret in being able to rejoice no matter how thorny may be our pathway, is the realization of the presence of the Lord with us. If our faith is but strong enough to face temptations feeling that the Lord is by our side to lift us up when we fall, we do not need to fear the

fiercest storms that blow. Almost everyone thinks that they themselves have more to bear than the average person, but if our pathway was all clear sailing we would soon forget about our Master, and try to battle with the world alone. If we would but stop to think when troubles come that they are sent to test our faith, would we not strive to please the Lord and with His help come out on the winning side?

The following lines which attracted our attention recently, may be an inspiration to some one, and we will pass them on:

"God never would send you the darkness.
If He thought you could bear the light,
But you would not cling to His guiding hand
If the way were always bright,
And you would not care to walk by faith
Could you always walk by sight?
The true 'He' has many an anguish
For your sorrowful heart to bear,
And many a cruel thorn crown
For your tired head to wear.
'He' knows how few would reach Heaven
as all
If pain did not guide them there.
If 'He' sends you the blinding darkness
And the furnace of sevenfold heat,
Tis the only way, believe me,
To keep you close to His feet,
For 'Tis always so easy to wander
When our lives are glad and sweet.
Then put your hand in your Father's
And sing, if you can, as you go.
Your song may cheer someone behind you
Who lose courage is striking low,
And, well, if your lips do quiver—
God will love you better so."—R. M. M.

A Prairie Wife

In the Canadian Collier's of a recent date was a description of a prairie wife, showing the conditions under which she lived and worked, and pleading for a recognition of Canada's debt to her in the development of the country. The fact that it has been widely reprinted in the Canadian press, reveals the consciousness of that debt, and the appreciation of her

A real home is surely a happy place built on the hilltop of cheerfulness. No shadow rests there. Morning comes early; evening stays late. Life is a stormy sea, home a harbor.

share in nation-building. It is hardly possible to exaggerate the limitations and difficulties of her life. Going from the East, where social privileges are many and taking up her task amid the solitude of the prairies, she faces a life that no one can understand who has not experienced it. Prairie homes have seldom the advantages of the East, and they are frequently situated where no sight of life can be had from any side. And here the woman works and waits through the interminable hour of national development.

A man who was in Edmonton twice this summer states that upon both occasions he saw insane women being

put on the train for the East. The prairie isolation had been too much and at last, too late, they were being taken back to older Canada. In Calgary is a man who has had experience on this line. A few years ago he took up a quarter section, and lived on it. He was miles away from any other human being, and such was the sense of isolation that when within six weeks of the time when the homestead would be his by virtue of occupation, he fled the spot, fearing that he might secure the property at the cost of his intellect.

Fair warning should be given to the women of the East, whose conception of the West finds form in a golden picture of waving grain, framed in blue sky and varnished by sunshine. There are days when the picture holds true. There are wondrous and peculiar charms of the prairie. But there are features which ought to be known. There are days of loneliness and heartbreak that can hardly be atoned for by any profit. Let all honour be given to the women who have gone and paid the price, but let those who are facing a decision be fairly warned of the other side of prairie life.—Ex.

If bread is rubbed with butter before putting it in the oven the crust will be more soft and flaky.

In making brown gravy try using coffee to stir the thickening with, instead of milk or water. It makes a richer and a better looking gravy.



Try this Thirsty Flour

A very thirsty flour. Absorbs a lot of water. Because it contains so much gluten. Manitoba wheat is wonderfully rich in sturdy gluten.

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

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

In your mixing bowl it greedily absorbs more water.

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

Your flour lasts longer, doesn't it? Less trips to your dealer.

That's how FIVE ROSES saves money. Actually, saves YOU money.

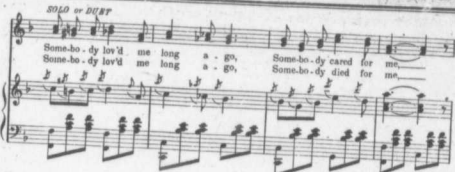
Use this economical flour.

Five Roses Flour

Not Bleached



Not Blended



Any Song Your Choice Only 10 Cents

Any one of these beautiful and inspiring Sacred Songs by Gordan V. Thompson, a Canadian.

- | | |
|---------------------------------|--------------------|
| 1. Jesus Now | 6. The Golden City |
| 2. Remember Me | 7. Mother's Story |
| 3. Drifting | 8. He Knows |
| 4. Anchored | 9. Somebody |
| 5. Step out for Jesus 10. Glory | |

The Complete Set of 10, \$1.00 only, postage paid.

These sacred songs, which are known as the life songs, are very much appreciated everywhere. They are inexpensive, yet printed on the best of paper, just like the 600 music you generally buy.

We give you above a line from one of these songs. Take it to the piano or organ and try it over, now while you are thinking about it.

Special Offer

We want to get 4,000 new subscribers to Farm and Dairy right away. To insure our getting these subscribers we give you the advantage of this unusually liberal offer at this New Year's season.

In return for only one new yearly subscription to Farm and Dairy, taken at only \$1.00 a year, we will send you the complete set of songs, as listed, and described above, postage paid to your address, for only 30c additional to the \$1.00 you send us for the new subscriber to Farm and Dairy.

This offer is good for two more weeks only

Plan to see some one right away—one of your friends or neighbors, and get him to subscribe to Farm and Dairy. Then write us, enclosing the \$1.20, and we will send you the complete set of songs. Postage paid.

It will pay you to take up this opportunity early. Grasp it at once.

FARM AND DAIRY, Peterboro, Ont.

FOR SALE AND WANT ADVERTISING
TWO CENTS A WORD, CASH WITH ORDER

FOR SALE—Iron Pipe, Pumps, Bolting, Nails, Chain, Wire Fencing, Iron Posts, etc., all sizes, very cheap. Send for list. Write stating what you want. The Imperial Waste and Metal Co., Dept. F.D., Queen Street, Montreal.



**HARTSHORN
SHADE ROLLERS**
Near the serial number on the
Stewart Hartshorn label.
Get it covered, no backings required.
Wood Rollers. Tin Rollers.

Systematic Housekeeping

By "Sunbeam," Leeds Co., Ont.
"A place for everything and everything in its place." How many times we hear this old adage. And yet how many of us take any heed of it? This rule should be equally observed in the house, in the kitchen, out on the farm and in the office. It applies to all, but I will talk only of this rule as it applies to the house.

We all know that the life of the housewife is an exceedingly busy one, even though she uses as much force-

besides the worry and inconvenience. Then too, the strength of spices is absorbed by the air.

HOW EASY TO FIND NOW.

Why not put all these articles in glass bottles or sealers, cork tightly, label each and place in one cupboard in the cook room and in the vast difference between work done properly in order, and the former careless, untidy system—just the difference between right and wrong. Tin cans might answer the purpose, but glass is preferable as anything containing acid should not be kept in tin.

Carelessness often endangers life. How many have lost their lives by swallowing the wrong medicine. All drugs containing poison should be placed out of reach of children's hands.

Let us all economize our time and strength by being more methodical, having everything as convenient as possible and by making a practice of never leaving anything out of place.

Conveniences in My Kitchen

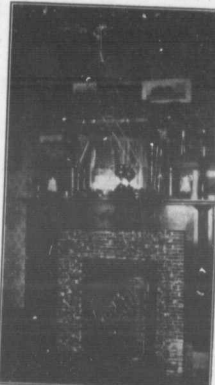
Mrs. J. E. Caldwell, Carleton, Co., Ont.

As a rule our farm kitchens have to be kitchen and dining-room for or help and therefore they need to be larger than those of our city friends who use theirs only as a work-room. They can have a small room with everything close at hand, but I find it is hard to make the larger room as convenient as a smaller one would be.

My kitchen is 18x20 feet, but as eight or 10 men and two women set their meals in it, I do not find it too large. In one corner we have a white enamel sink with a hard water tap at one end and a soft water pump at the other. We have a good range with warming closet and hot water tank. I would prefer a hot water tank attached to the water supply and hope to have it some day. Our kitchen cabinet is a great convenience over the old kitchen table and as our pantry is small we have a large cupboard for dishes and kitchen utensils. By having a refrigerator in the kitchen we can manage with very few trips to the cellar every day. We have a coal oil stove which is very useful too, especially in summer. We use it for ironing and with an oven over two burners and an Ideal Steam-er over one, we can roast a joint of meat, steam two kinds of vegetables and a pudding for a large family with very little heat.

THE DINNER WAGON

There is one other convenience in my kitchen that I will mention as I have never seen it in any other. This is a dinner wagon to take the meals to the dining-room. I load everything on it and wheel it into the dining-room, then when the meal is over, reload the dishes and return it to the kitchen. This saves many steps back and forth from kitchen to dining-room. Very nice dinner wagons can be bought, but they are rather expensive. Mine cost very little as my husband made it. He took an old table, a small one, put a rim of about three inches around it, put wheels under it and painted it. He then covered the top and rim inside and out, with white cloth and it answers the purpose very well indeed. I consider this dinner wagon one of the conveniences I could not do without, and while my kitchen is not a model one, I find it quite convenient to work in and do plain. Nor have I any reason to complain. I have a very good one, the average farmer's wife cannot have one with some careful planning and a little expense.



A Reward of Merit Entrenched

On the mantle in the illustration herewith, may be seen the silver cup won by Mr. Isaac Holland, Brownsville, Ont., in the first Prize Farms Co. competition conducted by Farm and Dairy. Mr. Holland, whose splendid farm has been fully described and illustrated in Farm and Dairy, came to this country a poor boy without a cent, but with lots of energy and ambition. What an inspiration to the rest of us is success such as this! —Photo by an editor of Farm and Dairy.

thought and economy about her work as is possible. But so many women lack method and system. For example, I have seen women when preparing to cook, go to the pantry, bring out a pair of box and there among several paper bags or parcels hunt for soda, cream of tartar, or possibly some spices, which often are not even labeled, necessitating the tasting of the contents of the parcels 'ere finding the one desired. Yet this surely is a poor way. Think of the waste of time,

or wringing clothes. The handle for operating the tub, the wringer handle, and the screw-wheel for throwing wringer forward out of the way when raising cover or locking into upright position over tub for wringing, all are on the same side.

CONNOR BALL-BEARING WASHER

You don't have to lift the lid off the washer and place it on the floor to leave a puddle of the Connor Ball-Bearing Washer is hinged. When raised it rests on the tub handle and drains into the tub. When closed it fits over the tub, not into it. And it is held down firmly, so no water can slip out when machine is going full speed, or any steam escape. There is no centre post in the tub to take up room or for

the clothes to wind around and tear. The stand is substantial, too. It rests solidly on the floor. It doesn't slip along the floor as do the ordinary stool-like stands. You see, the Connor Ball-Bearing Washer is no ordinary washer by any means.

But write to-day for our booklet. Read all about the Connor Ball-Bearing Washer—the washer that runs on ball-bearings, that's sold with a straightforward "money back if not satisfactory" guarantee on every washer. Let us tell you where you can see one.



Write for Booklet

J. H. CONNOR & SON, LIMITED, OTTAWA, ONTARIO

Never throw away good sweet pickle vinegar. Heat it up and keep it to use in mince-meat.

The Quality

OF THE WARMED AIR FROM THE

Good Cheer

CIRCLE WATERPAN WARM AIR FURNACE

DIFFERS FROM THAT OF ALL OTHER HEATING SYSTEMS

WHY?

BECAUSE, LIKE NATURES PURE AIR, IT IS PROPERLY HUMIDIFIED.

FURNACE CATALOGUE, MAILED ON REQUEST—
The James Stewart Manufacturing Company Limited
WOODSTOCK, ONT. WINNIPEG, MAN.

Making Boys' Rooms Attractive

Mrs. W. J. Root, Dis. Pres., Women's Institutes, Brant Co., Ont.
"Go to bed, Tom! Go to bed!" is often a command from mother during the long, cold evenings of fall and winter. And when Tom rubs his eyes and wearily drags himself from his warm corner on the kitchen lounge, or on the floor beside the stove and disappears to a cold and unattractive bed chamber, mother remarks that she does not see how Tom got into the habit of sleeping around in this way before going to bed. If poor Tom could find words to express his feelings, however, he might write the thoughts of many other lads of our land. How true it is that the bed chamber is the only room in the house that suffers most from neglect, and yet it is the only room that we can call our own, where we spend many hours out of the 24.

Then why not have our bed chambers personate the individual who occupies it? If Tom could have a warm room where he would find all of his possessions in order, how quickly he would steal away as soon as his evening chores were finished. Give him a cheerful room, with painted or kalsomined wall, with flags and pictures of horses or dogs, or perhaps a man of noble character that he will become interested in and study his life.

Have a box fastened to the wall where he may keep his few chosen books. By hanging a curtain over the opening, dust can be kept from collecting on the books. A good idea also is to have a box with a glass cover and encourage him to collect fossils and curios for the box. It will help him to study nature. A drawer in the table or dresser will serve to hold fish hooks and line and a window seat made by lining a box and covering with cretonne will be handy in which to keep boots.

If there is no clothes closet in the room a curtain of cretonne hung on one side of the room will keep his clothes from the dust. Coats and trousers should be hung on hangers bought for the purpose. In this way his clothes will be kept in shape. A rug or a painted or oiled floor, a comfortable chair, a lamp, and a mirror will fill Tom's heart with delight and help him to spend his evenings at home studying or reading. Make the boys feel that there is no place like home, so that they will not leave the old farm.

The Sewing Room

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

BUST SUPPORTER OR CORSET COVER.

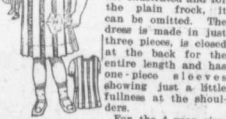


For the woman of full figure, a bust supporter is a most desirable accessory. This model fits that need and serves as a corset cover at the same time. It will be found a most satisfactory garment and a very easy one to make. There are only two pieces. The back has a seam at the centre and there are shoulder and under-arm seams. The fronts are fitted by means of lengthwise and crosswise darts that shape it perfectly to the figure.

For the medium size, 7 1/2 yard 36, 1 1/2 yard 44 inches wide with 2 1/2 yards of edging to trim as illustrated.

This pattern is cut in sizes for a 36, 38, 40, 42, 44 and 46 inch bust measure.

CHILD'S BOX PLAID FROCK, 754

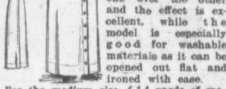


Little children are always charming dressed in just such frocks as this one. The box plaid give the long, slender lines. For the dress frock, banding can be applied after the manner illustrated for the plain frock. It can be omitted. The dress made in just three pieces, is closed at the back for the entire length and has one-piece sleeves showing just a little fullness at the shoulders.

For the 4 year size, 5 yards of material 1 1/2 7/8 yards 36 or 44 inches wide with 5 1/2 yards of banding.

This pattern of the dress is cut in sizes for children of 2, 4 and 6 years of age.

FINE-GORED SKIRT, 744



The gored-skirt is always a good one and always a favorite. In its latest form it is closed down the centre front with buttons and buttonholes. The gores are finished and lapped one over the other and the effect is excellent, while the model is especially good for washable materials as it can be opened out flat and ironed with ease.

For the medium size, 1 1/4 2 1/4 yards of material 36, or 3 1/4 yards 36 or 44 inches wide if the material has figure or nap, or 4 1/4 yards 27 inches wide if the material has neither figure nor nap.

This pattern is cut in sizes from 22 to 32 inches waist measure.

FANCY WAIST, 757B



The waists that give a chemise effect are exceedingly smart this season and this one is exceptionally attractive. There are tapering necks that give the effect of slenderness and the collar gives extremely becoming lines. Long sleeves will be much worn throughout the season but those of shorter length are equally correct, and these can be finished at the elbows with prettily shaped cuffs.

For the medium size, 2 7/8 yards of material 37, 3 3/8 yards 36, 1 7/8 yards 44 inches wide with 2 1/2 yards 27 inches wide for the collar and revers, 1 1/2 yard 18 for the chemise and 3 yards of lace for the frills, 1 yard 27 inches wide to trim as shown in back view. This pattern is cut in sizes from 36 to 46 inches bust measure.

Taxidermy Mount Birds

FREE

We teach you by mail to stuff and mount all kinds of birds, mammals, and insects. Also to tan skins and make rugs. Doomsday your home with your beautiful taxidermy. A complete big income selling machines and mounted specimens. Daily, quickly learned. In spare time by men and women. Success guaranteed. Write today for our free book "How to Mount Birds and Animals" absolutely free. It is 200 pages. OR TAXIDERMIST 8711 Stevedock, Oshawa, Ont.

FREE catalogue giving descriptive list of rural books for farmers, stock raisers, poultrymen, etc. Write for it! Book Dept., Farm and Dairy.

BELTING FOR SALE

500,000 feet, all kinds and sizes. New and second hand. Also 50,000 feet from pipe. All sizes, good as new for water, steam heating, greenhouse, construction, fencing posts, etc. Also enormous stock of wire fencing gates, pulleys, cable, rails, new roofing, saw, wire, forgings, all at 25% to 50% less than regular value. Catalogue on request.

IMPERIAL WASTE AND METAL CO.
651 Queen Street Montreal

MAXWELL'S

HIGH SPEED CHAMPION JEWEL FOOD CUTTER FAVORITE CHURN

Bestest running and most satisfactory washing machine made in Canada. Can be worked with side crank as well as top lever. Red Cypress Tub and the whole top opens up. Wash day is the easiest day of the week when you wash with the Maxwell "High Speed" Champion.

is just what you need for your kitchen. So much easier, quicker and more convenient than cutting up meat, etc., with a knife.

"Jewel" is superior in every way to imported food choppers, and being made in Canada, costs less.

makes the most delicious butter you ever tasted. It's real "quality" butter—that is a pleasure to eat.

Both hand and foot levers and roller bearings, enable a child to churn with the "Favourite." All sizes from 3 to 30 gallons.

Write us for Catalogues, if your dealer does not handle these household necessities.

DAVID MAXWELL & SONS
ST. MARYS, Ont.

A \$75.00 FREE Calf Offer

Pure bred Holstein bull calf, born Oct. 30, 1912, sired descendant of King Sergis, one of the greatest Holstein sires. Dam is a daughter of Pietertje Hengerveld Count De Kol. As a 3-year-old she gave 35 lbs of milk per day, testing nearly 4%. A great lineage and a fine calf.

Given For

Only 25 Subscriptions

To the first reader who sends a check of \$5.00 yearly subscription. This splendid offer is made in order to interest every reader in our fine offers of pure bred stock given for only a few orders. One worker gets this calf, all others who secure orders can choose pure bred pigs for nine subs., pair of fowls for five orders, or our fine commissions.

Winner will be announced in this department. Other workers can then choose other premiums or get 45 subs and earn a calf on our regular offer. No one who has already sent subscriptions may compete.

Start Now—Write for More Sample Copies and Order Blanks

FARM AND DAIRY

CITY MILK SUPPLY DEPARTMENT

Consumers' Responsibilities

Prof. H. H. Dean, O.A.C., Guelph
When producers and distributors have done their part, it is the duty of the purchaser or consumer of milk to assist also in the work. Milk should be kept cool, not above 50 degrees Fahr., and be kept, so far as possible, in tightly stoppered vessels. The two common practices of emptying milk into a pitcher or bowl and then setting it in a pantry, cupboard, or

even a refrigerator, is not a good plan. Milk absorbs flavors from its surroundings and, if in a warm place, rapidly spoils, owing to the action of bacteria, which readily fall into it from the air when milk is left in open vessels. If milk is delivered in bottles, it is best to allow the supply to remain in the bottles, assuming, of course, that these bottles have been properly cleaned before the milk was put into them, with the cap or cork in place, to keep out the air. Do not take out more than what is likely to be required for one meal, and if any be left over, do not pour it into the original supply, but keep it separate.

In the case of sickness, especially such diseases as scarlet fever, diphtheria, and so forth, be very careful with the milk. In no case should milk be taken from the sick room to the family dining room. Special precautions should be taken to cleanse

ed out Woodcrest Meta Vernon Dekol, a cow seven years old, with a remarkable record. She has averaged 89 lbs. of milk a day for the first six months of her present lactation period!

This cow is a deep, low-set, straight individual, with a very square udder, and splendid teats, and milk veins as good and well developed as on ever seen. She is a particularly lengthy, open cow, and has a wonderful length of rump.

As a yearling this cow was also an attractive individual, and she sold for \$140 at a Syracuse Consignment Sale. She made 95 lbs. of butter in a week, as a junior four-year-old, and Mr. Dimick bought her back again, paying \$700 for her, and was mighty glad to get her.

A young fellow had bought her at the Syracuse Sale and his father had given the son the "dickens" for having paid \$140 for a yearling!

PURE BRED PIGS—Want One Free?

They are given for a new subscription to Farm and Dairy. I have just received my pig, and it is a Jim Dandy. I write one young man. Over 500 readers have ordered Farm and Dairy pigs. Will you join them? You can choose boar or sow of any well-known breed. Write for pig offer, samples and order blanks.

FARM AND DAIRY

WANTED A MAN

To help in cow barn, or to handle team and do general work. Wife to help milk. Apply to

ALLISON BROS.

Allison Stock Farm, Chesterville, Ont.

1000 PERCHERONS Stallions and Mares WANTED in ONTARIO

I have sold nearly all I brought over this summer and am leaving for France the end of this month for another shipment of Percherons, stallions and mares. They will arrive at my barn, Weston, Ontario, about December 1st. Will have an exhibit at Guelph Fat Stock Show. Price will be in reach of everyone that wants a good stallion or a big brood mare, and terms to suit. Write for particulars, or better, come. No trouble to show what I have. Visitors always welcome. Address:

J. B. HOGATE

West Toronto, Ont.

Barns at Weston, Ont.

Maple Evaporators

To the five farmer our Perfect Maple Evaporator and a sugar bush can be made to produce a revenue when it is converted. With our Maple Evaporator sap is easily and economically introduced into the fused quality maple syrup. The body of the Perfect Evaporator is made of heavy sheet steel, thoroughly riveted and braced with steel angle and fitted with cast iron door and frame. The working of the evaporator is simple—put the sap in at one end and it comes out syrup at the other.

STEEL TROUGH & MACHINE CO., LTD., 6 James St., TWEED, ONT.

BREEDERS' DIRECTORY

Cards under this head inserted at the rate of \$4.00 a line per year. No card accepted under two lines nor for less than six months, or 25 insertions during twelve months.

VORSHIRE PIGS, all ages, either sex. Choice young boars, fit for service. Also sows of all ages, bred and heavy with pigs.—H. O. Benfield, Woodstock, Ontario.

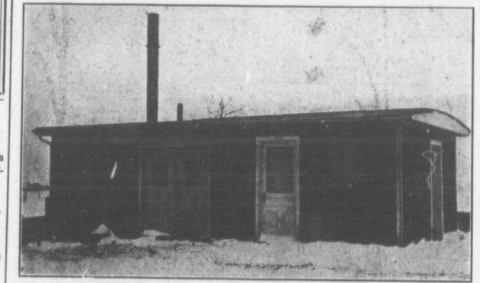
HANPSHIRE PIGS—Canadian Champion herd. Boar bred leaders. Some three months and under.—Hastings Bros., Crosshill, Ont.

FOR SALE—3 Sons of King Payne Segis Outhill, from O. P. cow. Also three Clyde Pillies and 3 Stallions, Yearlings.—K. M. Holby, Manchester, Ont.

FOR TAMWORTH SWINE—Write John W. Todd, Corning, Ont., R. F. D. No. 1.

SPACE right here costs you only \$4 a weeking line a year. Take up your weekly card—out! Then come in! Write Farm and Dairy today about it.

CLYDESDALES, Imp. Stallions and P. J. Line. Fresh importations always on hand. Every mare guaranteed to foal.—J. & J. Sempie, Milverton, Ont., and Laverne, Minn., U. S. A.



A Model Milkhouse on a Farm Catering to the City Trade

Milk as it is ordinarily handled on the dairy farm, would come far short of meeting the requirements of those fastidious consumers who are ready to pay an extra price for an extra good article. One of the first requirements on the farmer who would cater to a high-class retail trade is a milk house, well equipped for cooling the milk and for washing and sterilizing milk vessels. Such a model milkhouse is that of

C. E. Webb, Wentworth Co., Ont. here illustrated.

the milk vessels used in the sick room, and more particularly the milk bottle, before it is returned to the dealer. In my judgment, a paper milk bottle, which is used but once, is more sanitary, and is likely to supplant the glass bottle now in use. Quart paper bottles cost about one-half cent apiece and, in the long run, are likely to be less expensive than the present bottles, when we consider breakages, loss, labor in washing, cost of hauling and danger from spreading disease.

To consumers, we would say, do not be afraid to pay a good price for pure milk. Insist upon its purity, and be willing to pay the producer and distributor for extra care and cleanliness. To produce and distribute sanitary milk costs time and money, for which consumers ought to be willing to pay. Good, pure milk at 10 cents a quart is one of the cheapest foods which can be purchased. Impure milk is dear at any price. Milk with a sediment in the bottom of the vessel is unfit for use. A person selling such milk ought to be prosecuted, as it is a menace to public health. A little care exercised in the selection of a good milk supply, and a little extra price for extra care and cleanliness will often save many dollars spent for medicine and medical attendance, and prevent many sorrows in the home.

Let everyone help in the campaign for clean, wholesome milk!—Extract from an address.

A Wonderful Holstein Cow

Recently while one of the editors of Farm and Dairy was visiting the Woodcrest Farm, Chester Co., New York State, Mr. J. W. Dimick, proprietor of the Woodcrest Farm, point-

Truly the fathers are not always right when it comes to sizing up what it is safe to pay for a Holstein female!

Behind the Mule

Malcolm H. Gardner, Delevan, Wis. There are men who say that, because they sell their milk to condensaries or for shipping purposes, it is impossible to raise their own cows, and that they must depend upon the drover.

It is admitted that when a man holds back whole milk for his calves, the cost of those calves is well impressed upon his mind; yet if he will make this investment for his first crop of calves from a pure bred sire, that crop when it freshens will produce more than enough milk in excess of the amount produced by its dams, to raise its own calves. The investment only goes in on half-bloods; and returns large profits.

Every man who sells whole milk, is up against the problem of whether he shall raise his cow, or depend upon the drover, and he should be very careful in making his decision. He should choose the greater of the two evils. The Hindus have a proverb touching this point, which translated and versified runs as follows:

He was not very wise, yet he was not quite a fool!

He knew the ox might kick; so he stood behind the mule.

The man who depends upon the drover surely gets behind the mule; and, naturally, he usually gets what is coming to him.

The best way to avoid the worry that kills, is to keep busy.

MARKET REVIEW AND FORECAST

Toronto, Monday, Dec. 30.—Trade is quiet; everybody seems to be taking rest after the rush of the holiday season. Wholesale dealers report orders as coming slowly. Retail dealers, however, are still busy, as there is still the considerable trade of the New Year's holiday to be attended to.

Produce men in Toronto were able to meet the Christmas demand fully for everything except dressed poultry, and turkeys were a very scarce article on Monday and Tuesday of last week. There will be a small surplus left when all supplies are drawn upon for the New Year's holiday. Both the grain and live stock traders report little doing now.

WHEAT

An estimate, issued by the International Institute of Agriculture, places the total production of wheat the world over at 1,447,439,000 bushels of which Canada contributes 265,685,000 bushels. The crop last year was 3,530,411,000 bushels, and Canada's crop, 555,811,000. This shows a decrease in the total and an increase in Canada. Were Canadian wheat of the same quality as that produced in other countries, lower prices might be expected, but Canadian wheat is of superior quality, and prices will remain firm. Local dealers report little foreign demand for No. 1 Northerns at 94c; No. 2, 92c; No. 3, 90 1/2c; feed wheat, 65c; Ontario wheat is in slightly lower demand at 90c to 91c, and down to 75c for poor grades.

COARSE GRAINS

Grains are moving in small volume at steady prices. Quotations: Oats, C. W. No. 2, 43c; No. 3, 40 1/2c; No. 1 feed, 42 1/2c; Ontario No. 2, 35c to 36c outside; 37c to 38c here; corn, 55c to 56c; buckwheat, 47c to 48c; peas, \$1.10 to \$1.09; rye, 75c to 76c; barley, malting, 60c to 65c. At Montreal also business is quiet. Quotations are as follows: Corn, 49c to 50c; oats, C. W. No. 2, 43c to 43 1/2c; extra No. 1 feed, 42c to 42 1/2c; No. 2, 41c; No. 3, 40c; No. 4,

35c; buckwheat, 57c to 60c; barley, malting, 75c to 76c.

MILK STUFFS

Milk feeds still sell at the old quotations. Montreal, Jan. 2: 321; shorts, 325 to 324; Ontario bran, 321; shorts, 330 to 324. Milk feeds at Montreal are: Bran, 321; shorts, 324; middlings, 325 to 330. Montreal, Jan. 2: 317.

Dealers report that hay is in good demand at the advanced prices noted last week. Quotations: Clover hay, 1 1/2c to 1 3/4c to \$15; No. 2, \$9.50 to \$10.00; No. 1, \$10.50 to \$11.00; baled straw, \$10 to \$10.50. On the Farmers' Market, timothy hay sold at \$17 straw, \$16 to \$18; rye straw, \$18 to \$19. At Montreal quotations are: No. 1, \$14 to \$14.50; No. 2, \$12 to \$12.50; No. 3, \$10 to \$11.

HONEY

Honey is scarcer than was anticipated, and quotations have strengthened and advanced. Clover honey, 1 1/2c to 1 3/4c in 60-pound tins; 12 3/4c to 13 1/2c in 10-pound tins; 15c in five-pound tins; buckwheat, 8c in tins; 7 1/4c in bulk; comb honey, extra, 83c; No. 1, 82.60; No. 2, 82.40.

HIDES AND WOOL

Hides and wool are quiet, but Canadian hides have lowered prices somewhat. Country quotations are: Hides, cured, 13c; green, 12c to 11 1/2c; horse hides, 8c to 9c; horse hair, 5c. City prices are: No. 1, 13c to 15c; No. 2, 13c to 14c; No. 3, 12c to 13c.

SEEDS

Merchants are selling for small seeds at country points as follows: Assala, No. 1, \$1.60 to \$1.70; No. 2, \$1.50 to \$1.60; No. 3, \$1.40 to \$1.50; timothy, No. 1, \$1.30 to \$1.25; No. 2, \$1.25 to \$1.40; fax, seed, \$1.10 to \$1.25; red clover, No. 3, \$1.20.

POTATOES AND BEANS

Latest reports from liberal dealers supply are coming in unusually good in quantity for the month or two. Ontario potatoes are taken in car load lots at 60c and are sold out of store at 56c. New Brunswick's bring 55c and 53c.

Beans are quoted at \$2.90 to \$3 for primes and \$3.10 for hand picked. At Montreal and Canadian beans sell at \$2.25 and \$2.30 and Austrian beans \$2.30 to \$2.45.

EGGS AND POULTRY

There was an unusually good demand for eggs this Christmas, but the demand was met by an unusually good supply, and no advance in price is to be noticed. Cold storage were there in liberal quantities, but there was also a good fair offering of new laid. It would seem that poultry men are giving more attention to their flocks in winter and the egg crop is larger in consequence. Wholesale quotations are: Eggs, strictly new laid at 45c to 50c. Eggs offered on the Farmers' Market realized 45c to 50c.

FRUIT

Apples are going slowly. The market is glutted so far as inferior varieties are concerned, and only the best can be sold. Quotations: Spies, No. 1, \$3 to \$3.50; No. 2, \$2.50; No. 3, \$1.50; Kings, \$3 to \$3.50; Greenings and Baldwin's, 25c to \$3; cranberries, 40c.

DAIRY PRODUCE

Supplies of New Zealand butter have created an ester feeling on the Montreal market, but the result of these importations is not yet noticeable in Toronto. Dairy butter is here in plentiful quantities, and creamery butter seems to be in sufficient quantity to meet all demands. Wholesale quotations are: Dairy prints, 50c to 75c; creamery prints, 35c to 40c; solids, 25c to 30c; inferior, 35c to 40c. West Canadian cheese is being shipped. New twin ewes are quoted at \$4.34 to \$5.00; large, \$4.50; old twin, \$4.34 to \$4.50; large, 15c.

LIVE STOCK

Receipts of cattle have been very light at the city market this week. From experience in previous years, buyers have discovered that there is a very slack market for the couple of days preceding Christmas. The heavy buying of the previous two weeks had provided butchers

HOLSTEINS Lilac Holstein Farm

Offers young Cows and Yearlings at moderate prices.

W. F. STURGEON

Hollins Ave., C.P.R. Stronville, G. T.R. Glen Buell, Ont.

HAWTHORNE HOUSE DAIRY FARM

The Home of Lulu Kaye, the World's Record 31st Year Old Cow

Bull Calves for Sale

From such cows as Edith Prescott Albina Korndyke 11lbs. butter in seven days. 11 months after calving. Butter Boy Hengervald Girl, 16.30lbs. butter in seven days.

These Calves out of Bulls booked in High Records

Write to us or come to see our stock

D. B. TRACY COBURG, ONT.

REGISTERED HOLSTEINS FOR SALE!

I am overstocked. If you want to buy a fine young cow or a car load of them I can supply you, or if you need a young bull write me.

R. CONNELL, R.R. No. 2, Spencerville, Ont. Grenville Co.

GLENDALE HOLSTEINS

Elite crop of Pure-bred Holstein Bull Calves and young cows of Heifers, whose three nearest sires have aired Mayville Sylvia, over 21 lbs. butter in 7 days. R. O. M. at 1 year months (world's record), Lulu Kaye, 19.24 lbs. in R. O. P. as a senior heifer (world's record), and Jewel Pet Poeh D. Kol, 35.58 lbs. butter at 4 years (world's record). Prices reasonable. All correspondence promptly answered.

WM. A. SHAW, BOX 31, FOXBORO, ONT.

RIVERVIEW HERD

Offers Bull Calfr. dam 15.90 lbs. Jr 2-year-old; her dam a 27 lb. cow and G. dam a 35 lb. cow. Sire King Isabella Walter, whose dam and her daughter, dam and G. dam of his sire average for the four 30.17 each. Also a few A. R. O. cows.

P. J. SALLEY - LACHINE RAPIDS, QUE.

Avondale Farm HOLSTEINS, CLYDESDALES, YORKSHIRES AND DORSETS

A. C. Hardy - Prop.

To make room for daughters of Prince Hengervald Pietie we are offering a few females, bred to the greatest bred bull in Canada, also a few extra good yearling rams.

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

Notice

9 Builcoming yearling, from our own Stock Bull, Sir Seid, a sire of champions. Cornopsis Clothide - 16 lbs. milk and butter in 7 days. 27.68 lbs. milk and 11.4 lbs. butter in 10 days, and some also from Sir Shutecliff Seta, whose 11 nearest dams average 21.5 lbs. butter in 7 days. Priced for Clear Out Now before New Years to make room for young stock now coming, \$80 to \$100, according to records of status and individuality. Write at once for the one you want or come and see them. CENTRE and HILLVIEW HOLSTEINS P. D. Ede, Oxford Centre, P.O. Ont. Long Distance Phone, Woodstock Station.

HOLSTEINS Forest Ridge Holsteins

A few sons of King Regis Pietere for sale from tested dams. Priced right on considering quality.

Also a few Heifers bred to him for sale. Write us for your name or better, come and see them. Anything we own is for sale. L. H. LIPSITT, STRAFFORDVILLE, ONT. Elgin Co.

LAKEVIEW HOLSTEINS

To make room for the coming crop of calves, we are offering bull of the richest breeding at farmers prices. 11 children of Pictorius Hengervald Count De Kol and of Columbia Johnson Lad, all out of Record of Merit dams. Come now and see your choice.

E. F. OSLER - BRONTE, ONT.

CAMPBELLTOWN HOLSTEIN HERD

Plan to spend your New Year day at the great sale in Tillsonburg, when the Campbelltown Ontario Holstein Breeders' Convention Sale Co. will offer 75 head of the best cattle ever offered the buying public. Watch for our contingent of 11 children Cows and Heifers. Some of them winners Dairy tests and in the show ring.

R. J. KELLEY, HUNTSBURG, ONT.

HOLSTEINS

No matter what your needs in Holsteins may be, see RUSSELL, the live Holstein man.

He is always prepared to furnish anything in Holsteins.

Write, or come and inspect

T. H. RUSSELL Geneva, Ohio

Ourvilla Holstein Herd

The first 31 lb cow in Canada was developed here. The only herd in Canada that has the grandest of our high-testing Holsteins. The only herd in Canada where 12 two-year-olds with first calves averaging 17 lb. The butter in 7 days have been developed, also the only herd in Canada containing 6 Junior two-year-olds averaging in R. P. 13.72 lbs. milk, 547 lb. butter.

If you want to raise some of the best secure a bull ready for service or a bull calf, all sired by our bull whose two nearest dams average 31.03 lbs. milk in 7 days.

EDMUND LAIDLAW & SONS, ELGIN COUNTY, AYLMER, WEST - ONT.

PICKERING'S

For Sale or Exchange, Cholou Young Bull, two sires, two years old, son of Lady Wayne Norine, 23 lbs. butter, 7 days. Also a few other fine young stock.

Also, Young Bull, fit for service, out of tested dam, sired by brother of P. C. Poeh D. Kol, 35.58 lbs. butter in 7 days. Champion weekly record cow of Canada.

Also, a few Heifers and Calves. Prices reasonable.

WM. A. RIFE, HESPELER, ONT. Nine miles south of Guelph.

Holsteins

stronger now than ever at FERNDALE STOCK FARM

Bulls from 1 to 8 mos. old, all sired by Korndyke King Schillars, 46 lbs. milk and 8 1/2 lbs. butter in 10 days, 31 lbs. butter in 7 days. Also a few other fine young stock. Also a few other fine young stock. Also a few other fine young stock.

CLYDESDALES - Write to us for our choice of stock from here. Come and see them!

Fierheller Bros. Mt. Pelion, C.P.R. Station MT. ELGIN, ONT.

You Pay for This Lamp. Many times in ruined elegance of odor and cleaning of great lamps, you will buy it and own it. Sample, size and description sent on request. Write to day for circular and free post card.

RICE-KNIGHT Ltd. Toronto or Regina

NO MORE WET OR COLD FEET!

Try a Pair of our famous (Health Brand) FELT-LINE CLOGS

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CANADIAN FELT-LINED CLOG CO., Dept. 1 363 Spadina Ave., Toronto, Canada

PURE BRED CALVES WANT ONE FREE?

They are given for subscriptions to Farm and Dairy. You can have till spring to get one. Many of our readers are working. Will you join them? Write for call offer, samples and order blanks.

FARM AND DAIRY

HOLSTEINS

The Graceland Farm Holsteins

Foundation Cows, 4 yr. old and over. Average over 70 lbs milk in one day. Record of Performance as follows: Record of Merit Cows, 21.39 to 23.39 lbs. butter a week. Write for descriptions and prices.

ELIAS RUBY, - - - TAVISTOCK, ONT. R. R. No. 5

CATTLE LABELS. Metal tags for cattle, sheep and hogs, with name and address of owner and number. Don't be without them. Send a post card for free sample and circular.

CLEARVIEW FARM HOLSTEINS FOR SALE.—One Yearling Bull, also Bull Calf, whose dam, Glamamy Boy Wayne 3rd, gave 4445 lbs. 20.26 lbs. butter in 7 days, 15,304.5 lbs. milk, 669 lbs. butter in a year, as Junior 2-year-old; sired by Logan Prince Shukling, senior and grand champion, and winner of \$500 special champion, and 1911, sire of female champion at London in 1912, also sire Bull Calfs by same sire. Write THE WOOD, MITCHELL, ONT.

Paired Registered HOLSTEIN CATTLE The Greatest Dairy Breed as per the Holstein Friesian Assoc. Box 148 Balthore Vt

LYNDALE HOLSTEINS We are now offering Bull, also female, old, one from a daughter of Star Jewel Hengerveld 3rd, A. H. O. 53.39. His 4 nearest dams, including his dam are 27 years, average over 27 lbs. butter each in 7 days. The other is from a grand-daughter of De Kol Bull's Butter Boy 3rd, his 3 nearest dams average over 27 lbs. each. We also offer females of any age. BROWN BROS., - - - LYK, ONT.

WANTED General Farm Hands. Must be milker. Scotch or Irish preferred. JNO. C. BROWN, - STAMFORD, ONT.

ELMWDALE DAIRY HOLSTEINS A few females for sale. Calves, Yearlings or Cows. \$5 head to select from. Most of the young stock sired by Baldwin Ormsby (7515). Service bulls, Paladin Ormsby and Highland Calamy Calambas (12425). FRED CARR, BOX 113, ST. THOMAS, ONT.

HOLSTEINS AND TAMWORTHS

From R. P. and R. M. Dams, sired by Sir Lyons Hengerveld Segis. His dam's record 35½ lbs. His sire King Segis. J. McKENZIE, Willowdale, Ont.

JERSEYS

GOLDEN FERN LAD STRAIN JERSEYS OF HEAVY PRODUCERS. We have for sale 4 Yearling Bulls ready for service: 4 Yearling Heifers; Calves, both male and female; and females of all ages. Visit our herd (4 cows now milking). Write us about Jerseys you want. D. DUNCAN, - DON P.O., ONT.

GRAND TRUNK RAILWAY SYSTEM

CALIFORNIA MEXICO FLORIDA AND THE SUNNY SOUTH The Grand Trunk Railway is the most direct route from all points East through Canada via Chicago, Detroit, or Buffalo.

ONLY DOUBLE TRACK ROUTE Round trip tourist tickets, giving choice of all the best routes, together with full information, may be obtained from any Grand Trunk Agent.

with sufficient supplies to meet all demands. Most of the good Christmas stuff had been marketed in the previous two weeks and offerings in the last week have been of medium to common quality. The top price was \$625, this figure being paid for good to choice butchers' cattle. Cows ranged from \$100 to \$150, with common stuff and canners at \$25 to \$50. On the Thursday market last week, trade was taking a rest.

Small meats were in good demand. Lamb brought from \$7.45 to \$7.75; light ewes, \$4.50 to \$5.00; heavy, \$3.50 to \$4. Calves run from \$35 to \$9.

At Montreal also the cattle trade was slow. A top price of \$7 was realized on some extra well finished stuff, but for the most part, offerings were of medium to poor quality. Quotations were about as follows: Butcher's cattle, choice, \$6.75 to \$7, com. to med., \$4.95 to \$5.50. Canners, \$2.50 to \$3; choice cows, \$5.35 to \$5.60; med. quality, \$4.75 to \$5; choice milkers, \$6 to \$7; com. to med., \$3.50 to \$5.00. On \$55 to \$65; calves, \$3 to \$12; bucks and culls, \$1.45; lambs, \$6.75 to \$7.

MONTRÉAL HOG MARKET.

Montreal, Saturday, Dec. 28.—There was a firm market for live hogs this week, and prices are steady and unchanged at 83.75 for a few, selected lots, weighed off cars. Dressed hogs were firm at \$12.50 to \$13 for fresh killed abattoir stock. Country dressed hogs are quoted at \$12.50 to \$12.

EXPORT BUTTER AND CHEESE.

Montreal, Saturday, Dec. 28.—The market for cheese is without any feature worth noting this week. The holiday spirit has prevailed, no trading has been done so far as can be ascertained. Holders are firm and asking more money than can be obtained at present, but will not reduce prices to meet the exporters' demand on account of the high cost of the goods that they are holding. Prices range from 12c to 15c in round according to quality.

The butter market is quiet on choice grass-made creamery, but is steadily decreasing on fresh-made fodder goods, which are offering at from 1.5c to 2½ c, according to quality. Every effort is being made to dispose of these goods as fast as they are offered, until the supply is exhausted, there will be no improvement in the market and very little movement in stored goods.

TROUT RUN AYRSHIRES

In a recent letter to Farm and Dairy, Wm. Thorn, Lynedoch, Ont., has the following to say: "My Ayreshires are doing well. I have for sale four very choice yearling bulls. One is out of Red Ross, with record of 9.37 lbs. milk in 29 days, testing as high as 4.3 lbs. butter fat. This is a large, strong bull in good condition, and a prize winner. Another one, the making of a grand bull and a nice smooth fellow, with nice head and horns, and a prize winner. This is a son of Bright Lassie that gave 9.230 lbs. milk, 37.39 lbs. butter fat, testing as high as 4.4 in one year as a two-year-old. This calf is a son for some brother, as his dam is of large size, has a perfectly shaped udder and large teats. One of our fashionable color and a good strong fellow, is a son of White Floss, with a record of 10.655 lbs. milk, 42.127 lbs. butter fat, in one year. This young bull is from great producing stock. The dam of the fourth bull I offer is Ayreshire Beauty of Trout Run, Ayreshire Beauty gave 8.02 lbs. milk, 31.54 lbs. butter fat, in one year as a two-year-old. She also won second prize in the Dairy Test at Guelph in 1911 as a three-year-old. The fourth of these bulls gave 8.0 to 8.75 cwt. They are sired by my imported bull Hole House Pilot, that has proved himself as being one of the greatest sires of heavy milking Ayreshires. He sired such noted heifers as Hole House Flirt of Trout Run, that gave 10,790 lbs. milk, 43.22 lbs. butter fat, in one year as a two-year-old.

"I also have for sale several young bull calves, one out of White Floss, which also sired a number of choice females of different ages, some already freshened and some due to freshen. They are guaranteed right in every respect, and in choice condition, some with high records.

R. CONNELL'S HOLSTEINS R. Connell, R. E. No. 3, Springville, Ont., writes Farm and Dairy that he has a splendid bunch of registered Holstein

heifers. They are three years old next spring, carrying their second calf in the week, and offering in the last week a bull of which his owner is proud. His dam is owned by Messrs. D. C. Platt & Sons, of Hamilton, Ont., and last year in her official test she made as a five-year-old 291 lbs. of butter in seven consecutive days. She is a three-quarter sister to Jennie Bongers Ormsby, a cow that last year as a five-year-old made over 33 lbs. of butter in one week, and is therefore "the highest record ever living in Canada." The sire of Mr. Connell's bull is an official tested sire, and was imported from the herd of Mr. C. W. Loomis, of Odgenburg, N. Y.

Mr. Connell has many fine individuals in his herd bred by such noted breeders as Stevens, of Philadelphia; Gilroy, of Glen Buel; Wallace, of Shanly, and other breeders. It would be difficult for a buyer to step out and find such a select lot of fine young cattle as Mr. Connell has now for sale.

SEED AT THE OTTAWA WINTER FAIR

Good seed grain of all kinds will be in demand this spring. If you have more than enough to supply your own needs, why not send an exhibit to the Winter Fair at Ottawa, held from January 14th to 17th. A large number of farmers will be there looking for good seed, and when they see your exhibit, showing the amount you have for sale and the price you ask per bushel, they will likely place an order with you for the seed grain. The person in charge of the grain exhibit will be glad to bring you in touch with prospective buyers.

Grain that is shown at an exhibition should be well cleaned and graded, but representing accurately the bulk lot ready for sale. The price list is a liberal one, and it should bring out a large number of exhibits. Get in your entries at once to the Secretary, Mr. J. D. Jackson, Ottawa. Entries close Jan. 1st.

The crop and our Canadian winter makes work in the woodlot most enjoyable. Such work is also profitable with coal over \$8 a ton.

AYRSHIRES

Tanglewyld Ayreshires

Champion "Eard of High-testing Record of Performance Cows. A choice lot of Young Bulls and Bull Calves for sale from R. P. Dams and by Royal Sire of Bonnie Brae, a son of Elsen, R. of F. Post, 13,265 lbs. milk and 635.40 lbs. of butter.

W. F. BAY, HAVESDALE STOCK FARM, WATFORDS BROS., - - - ROTHAM, ONT. Long Distance 'Phone.

RAVENSDALE AYRSHIRES

Special offering of selected animals of Young Bulls from two to 18 months old. Write for prices and conditions and see them. Price reasonable. - - - W. F. BAY, HAVESDALE STOCK FARM, WATFORDS BROS., - - - ROTHAM, ONT. QUEBEC

G. I. R. STARBOARD, PHILLIPSBURG, QUEBEC

Burnside Ayreshires

Winners in the show ring and dairy tests. Animals of both sexes, Imported from Ontario or Canadian bred. Long distance 'Phone in house.

R. R. NESS, - - - HOWICK, QUE.

AYRSHIRES BRED FROM CHAMPIONS

Bulls sired by Duke of York, son of Champion R.O.P. cow, Princess of Tanglewyld. One from the best cow I ever had. Two ready for service, one March, 1913, calf.

Will also spare A FEW YEARLING HEIFERS by Auchenbaird Albert (top). These will be bred to Duke of York.

Also a few HEIFER CALVES by Duke of York. Write me for particulars and to take the opportunity to see the best to your herd or to start a foundation.

W. W. Ballantyne & Son R. R. No. 5 - - - Stratford, Ont.

125-Egg Incubator and Brooder for \$13.75

If ordered together we send both machines for only \$13.75 and we have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. F. D. address. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boiler, self-regulating thermostat under glass. 125 eggs. Especially adapted to Canadian climate. Incubator and Brooder for sale in lots. Incubators finished in natural color show in the high grade Crane and Redwood boxes. Write for price list to cover letter material. If you will write to us to investigate, we feel sure you won't. Don't buy any 125-egg or 100-egg machine until you see ours. Send for FREE catalog today; or send in your order and name. Write us today. WISCONSIN INCUBATOR CO., Box 216, Racine, Wis., U. S. A.

They Cost Less



and Last Longer

"Clay" Gates

STRONGEST and best farm gate made, \$0.00 said in 1912. Can't be bent or break. Can be raised or lowered. Good for Winter and Summer. Send for illustrated catalogue.

THE CANADIAN GATE CO. LTD., 29 Morris St., GUELPH, Ont.

FREE-FARM ACCOUNT BOOK Know How Much You Make This Year

No one shall pay a cent for Bickmore's Farm Account Book. It will be sent free to any farmer who will send good enough to tell who and where he is. It will be sent free to any farmer who will send good enough to tell who and where he is. It will be sent free to any farmer who will send good enough to tell who and where he is.



Be Sure And Watch The Price

BICKMORE'S FARM ACCOUNT BOOK BICKMORE BROS. & CO. INC. 100 N. W. 10th, N.E., OKLAHOMA CITY, O.K.

BICKMORE'S GALL CURE

A remedy that cures, and has cured, all the cases of galls that have troubled the horse world all the time. Users keep it in their stables and use it as they see fit. It cures all cases of galls, whether they be on the head, neck, or body. It cures all cases of galls, whether they be on the head, neck, or body. It cures all cases of galls, whether they be on the head, neck, or body.

Send us your name and we will mail you a free copy of Bickmore's Farm Account Book.

OUR FARMERS' CLUB

Interdependence Invited

ONTARIO

LEEDS CO. ONT.

ATHENS Dec. 22.—Since Walter H. Smith, B.A., representing the Ontario Department of Agriculture to Leeds and Grenville, became established in Athens, the influence of his good work in the interests of agriculture has been felt in many directions. The benefit of his advice and practical instructions has been enjoyed by a number of progressive farmers in the section. One of the recent features of his work has been the short course in judging live stock held at Leeds on Dec. 16th and 17th. These courses have been very well attended, there being from 80 to 150 persons present at each of the classes.—Brookville Times.

LIBERTON CO. ONT.

KITIMONTI, Dec. 12.—There has been a nice spring weather during this month; very little snow or cold. Cattle came off in grass in good shape. There are some reports of feed being scarce, also of potato rotting in the cellar. Those who sprouted linen on their potatoes say it is a success. Poultry are selling well. It is a success. Turkeys, 16; geese, 16; chickens, 23; 50; fowl, 16; beef, 7.10; pork, 16; to 16; butter, 23 eggs; 50; potatoes, 90; a bag; 16; wheat, 16.—J. & T. E.

OXFORD CO. ONT.

WOODBINE, Dec. 23.—We have some nice, but not enough for heavy steaming. Number of the farmers have sent for ear load of cotton seed meal for feed. It is good feed. A great many are getting winter dairies. It pays better than summer dairying. Butter, 34 to 35; eggs, 40 to 45; hogs are selling at 17.75; good beef cattle are very high horses to quiet just now, store cattle are very hard to get, and very high in price.—A. M. McD.

HURON CO. ONT.

BLVET, Dec. 23.—Fall work was pretty well completed. There is just enough snow now for sleighing. Many are taking advantage of same to do up odd jobs. Christmas traditions were poor. Eggs are going down little. Horses seem to be in very good sound at big prices. Feed is going to scarce.—R. E. R.

MIDDLESEX CO. ONT.

LAMBTON, Dec. 23.—We are having good sleighing for the holidays, which adds wonderful pleasure to the joyous season. Threshing, all finished; the last to be completed was the clover. It yielded rather poorly, while the seed is an inferior quality. Some of the farmers have had good success from raising turkeys this year and as the price was 0.15, their returns were above high-water mark. Two most branches of the rural mail starts far here shortly, adding a great convenience for the use of farmers. All kinds of farm produce sells at good figures, and even one appears to have abundance.—J. O.

BRITISH COLUMBIA

NEWFISTON DIST. B. C. CHILLIACK, Dec. 16.—We are having splendid weather for this time of the year. The snow in the surrounding mountains is high. It has been for years. The grass is all growing. The Fraser River has been the lowest ever known since white water came upon it.—J. C.

HOLSTEINISTS FROM DECEMBER 1ST TO 14TH

- 1. Dutchbe Kol Calanalty, 5667, at 5y. 6m. 23d; milk, 43, 536 lbs.; fat, 17.91; equal to 22.84 butter. Owner: Alias Ruby, Tavistock, Ont.
2. Wooden Trjstjo Wridan, 11,877, at 5y. 6m. 23d; milk, 452.1 lbs.; fat, 15.99 lbs.; equal to 19 lb butter. Owner: Jas. G. Currie, Ingall, Ont.
3. Linnie Irton, 6669, at 7y. 6m. 7d; milk, 448.3 lbs.; fat, 15.90 lbs.; equal to 17.88 lb butter. Owner: M. L. Haley, Springfield, Ont.

4or Four Year Class

- 1. Centre low Butter Gem, 10,254, at 4y. 6m. 25d; milk, 465.8 lbs.; fat, 16.74 lbs.; equal to 31 lb butter. Owner: Jas. G. Currie, Ingall, Ont.
2. Trjstjo Wridan, 12,331, at 4y. 7m. 30d; milk, 411 lbs.; fat, 14.96 lbs.; equal to 18.70 lb butter.
Fourteen record; milk, 807.6 lbs.; fat, 23.68 lbs.; equal to 35.68 lb butter. Owner: W. O. Prop, Tillsonburg, Ont.

3or Four Year Class

- 1. Mand 4a Segie, 17,442, at 4y. 2m.

- 7d; milk, 391.1 lbs.; fat, 15.7 lbs.; equal to 19.22 lb butter. Owner: M. L. Haley, Springfield, Ont.
2. Oshawa, 10,000, at 4y. 3m. 27d; milk, 397.4 lbs.; fat, 13.3 lbs.; equal to 14.67 lb butter. Owner: Jas. G. Currie, Ingall, Ont.

Senior Three Year Class

- 1. Belle Mercedes, 10,217, at 3y. 2m. 26d; milk, 495.5 lbs.; fat, 17.05 lbs.; equal to 21.32 lb butter. Owner: Elias Haley, Tavistock, Ont.
2. Gladys Peterette Arthi Popk, 10,826, at 3y. 7m. 15d; milk, 470.3 lbs.; fat, 16.76 lbs.; equal to 20.82 lb butter. Owner: C. Bollet, Tavistock, Ont.
3. Korodkye Mand Beas, 17,441, at 3y. 7m. 15d; milk, 356.9 lbs.; fat, 16.19 lbs.; equal to 20.24 lb butter. Owner: M. L. Haley, Springfield, Ont.

4. Maple Grove Lina, 11,162, at 3y. 11m. 24; milk, 474.1 lbs.; fat, 15.6 lbs.; equal to 20.05 lb butter. Owner: G. Bollet, Tavistock, Ont.

5. Madona De Kol 3rd, 12,424, at 3y. 7m. 7d; milk, 385.6 lbs.; fat, 14.2 lbs.; equal to 17.96 lb butter. Owner: J. H. Taylor & Son, Woodland, Ont.

6. Olga De Kol, 13,353, at 3y. 8m. 19d; milk, 368.8 lbs.; fat, 12.44 lbs.; equal to 15.54 lb butter. Owner: Jas. Kilgour, Eglinton, Ont.

7. Coral De Kol 2nd, 13,486, at 3y. 7m. 19d; milk, 602.3 lbs.; fat, 11.9 lbs.; equal to 14.48 lb butter. Owner: Jas. Kilgour, Eglinton, Ont.

8. Pieterle Beauty, 11,039, at 3y. 7m. 25d; milk, 389.9 lbs.; fat, 10.98 lbs.; equal to 13.72 lb butter. Owner: J. Lemuel, Tavistock, Ont.

Senior Two Year Class

- 1. John Veredee Tchoe, 15,29, at 2y. 10m. 14; milk, 379 lbs.; fat, 12.49 lbs.; equal to 15.62 lb butter. Owner: J. Lemuel & C. Bollet, Tavistock, Ont.

Junior Two Year Class

- 1. Tomewood Merwyn, Queen, 17,926, at 1y. 10m. 19d; milk, 234.8 lbs.; fat, 12.90 lbs.; equal to 14.78 lb butter. Owner: M. L. Haley, Springfield, Ont.

2. Idaline Ledova of Campbellton, 17,993, at 1y. 11m. 16d; milk, 920 lbs.; fat, 9.20 lbs.; equal to 12.01 lb butter. Owner: R. J. Kelly, Tillsonburg, Ont.

3. Toitilla Saracoste of Riverside, 16,510, at 1y. 8m. 16d; milk, 280 lbs.; fat, 9.44 lbs.; equal to 11.28 lb butter. Owner: M. L. Haley, Springfield, Ont.

4. Aileen Daisy Pieterje, 10,737, at 1y. 8m. 16d; milk, 356.1 lbs.; fat, 9.32 lbs.; equal to 10.49 lb butter. Owner: G. J. Bollet, Tavistock, Ont.

5. Inka Sylvia Maida, 16,621, at 1y. 11m. 7d; milk, 327.7 lbs.; fat, 9.06 lbs.; equal to 11.28 lb butter. Owner: Jas. Kilgour, Eglinton, Ont.

6. Lady Zevale De Kol, 17,969, at 2y. 2m. 24; milk, 327.1 lbs.; fat, 8.94 lbs.; equal to 10.92 lb butter. Owner: J. Lemuel and C. Bollet, Tavistock, Ont.

7. Rosie Choice of Campbellton, 17,926, at 1y. 11m. 25d; milk, 219.9 lbs.; fat, 8.27 lbs.; equal to 10.72 lb butter. Owner: R. J. Kelly, Tillsonburg, Ont.

8. Lorena De Kol Calanalty, 15,877, at 2y. 6m. 17d; milk, 385.1 lbs.; fat, 8.44 lbs.; equal to 10.55 lb butter. Owner: W. O. Frouse, Tillsonburg, Ont.



Holsteins

Holstein cattle have been growing in popularity for years. They will continue to grow in popularity for many years to come.

Perhaps, dear reader of my advertisement, you are one of those who believe that the end is in sight for the popularity of Holstein cattle. That case you will be wise to look into the question and to study it with an open mind and without prejudice.

What are the facts of the case?

There are many Holstein cattle giving from 20,000 to 25,000 lbs. of milk in one year. They are giving upwards of 1,000 lbs. of butter in one year. These are pure-breds, carefully handled.

It'll pay you to get wise to Holstein cattle.

Make them your favorites. Give Holsteins an opportunity, and they will make money for you. They will find ready sale when you want to put them on the market.

Grade herds of Holstein breeding have been discovered.

One having to give individuals giving as high as 17,000 lbs. of milk in one year. Several big herds of grade Holsteins in Ontario have been known to average over 3,000 lbs. of milk through a single lactation period.

I invite you to come to see my farm.

and talk this matter over. I would like you to see what Holsteins have done for me. I have upwards of 100 Holsteins in my last records. They are excellent cattle, of large capacity. They are cattle that you can sell at any time and make money.

Where can you find another breed of cattle to equal these records here made by Holstein cattle?

I am sold right out of young stock and bull calves from my great herd bull "Prince Hengerveld of the Pontiacs." I am now looking orders for the coming crop of calves. Do you want one? Write me, or—

Come and see my big herd and get the selection you want. I have individuals that will make you an excellent foundation for a herd of pure bred Holsteins. I will have in the course of a few weeks bull calves that when matured will mate to your advantage with your grade cows of one's. Bear in mind that I price my stuff reasonable, so that it will make you money.

THE MANOR FARM GORDON S. GOODERHAM BEDFORD PARK, Ont.

FAIRVIEW FARMS HERD

Offers a splendid son of Ray Apple Korodkye, the young bull we recently sold for \$3,000.00, and out of a 24-month daughter of Pontiac Korodkye (record made for 4 years).

Calves in five months old, nicely marked and straight as a string, and I will sell them. Well worth the money. WRITE ME FOR PRICES, ETC.

E. H. DOLLAR, Heuvelton, New York (Prescott)

Holsteins Over 4% Fat

I have established on my farm at Oshawa, Ont., a herd of Holstein cattle and bull you a better paying herd. Present offering for sale Bull Calf, grandson of King Segie and Pontiac Pet.

A. A. FAREWELL : : : OSHAWA, ONT.

MOLASSINE MEAL advertisement featuring a central logo, text describing its benefits for horses and pigs, and several circular seals with 'PCL STUBBED' and 'THE STOCK BEST FOOD'.



No Ruts on this or any other Concrete Road

The roadway shown in the illustration is a typical one of its kind. You can see one just like it in almost any Canadian community. Take a look at the one nearest you. You will see a big double rut down the centre, made by the vehicle driven there to escape the soft, oozy surface on either side.

THERE'S a reason for that double rut down the centre. A Macadam road when originally laid, **must** be constructed with a high "crown," so that the water may drain off properly on either side.

A Concrete road, you'll notice, is **not** built that way. True, it has a slightly sloping surface, a certain amount of "crown," but very little is necessary, because a concrete surface drains so much more easily than dirt.

The high crown of the Macadam road forces all vehicles to drive in the centre of the road. From the very day the roadway is ready every wagon takes the middle of the road; and every one that follows, follows in the ruts thus started. The result is that you have two narrow strips of surface carrying the total traffic that passes over that road. Everybody takes to the ruts.

Now see what happens when the road is of concrete. The slope, or crown, of a concrete road is so imperceptible that there's no need to keep to the centre. Vehicles, therefore, use the entire width of the road. The traffic is **distributed** over the whole surface.

When you drive along a concrete pavement, you'll find no ruts whatever. Concrete doesn't give them a chance to get started.

Concrete roads are not an experiment. They have been proven the best, and in the long run, the cheapest of all roads.

Wind and rain, instead of making mud-pools and ditches, only serve to keep them clean enough to serve as a pathway for pedestrians.

For further information, Address:

PUBLICITY DEPARTMENT
CANADA CEMENT COMPANY, LIMITED
MONTREAL

CONCRETE roads save the public money, their cost of maintenance is so low. Concrete roads are within the reach of every community—the first cost is very little more than that of a good Macadam road: the ultimate cost is infinitely less.



You Can't Wear Ruts in a Concrete Road

CONCRETE is the ideal pavement for either town streets or country highways.

Concrete is "rut proof."

TO realize what this means, it is only necessary to compare a piece of dirt or Macadam roadway with one that is built properly of concrete.



Driving in the Rut. Where else can you drive?

Concrete roads save the farmer's money, by allowing him to haul bigger loads, in faster time; they are never impassable when he wants to hurry in with a load of produce to catch his prices.

The cost of maintaining 33 miles of concrete road in Wayne County, Michigan, does not exceed \$6.00 per mile per year.

It costs Peel County, Ontario, \$900.00 per mile to maintain Macadam roads for the same period.