

Ninth Annual Dairy Magazine Number

# FARM AND DAIRY & RURAL HOME

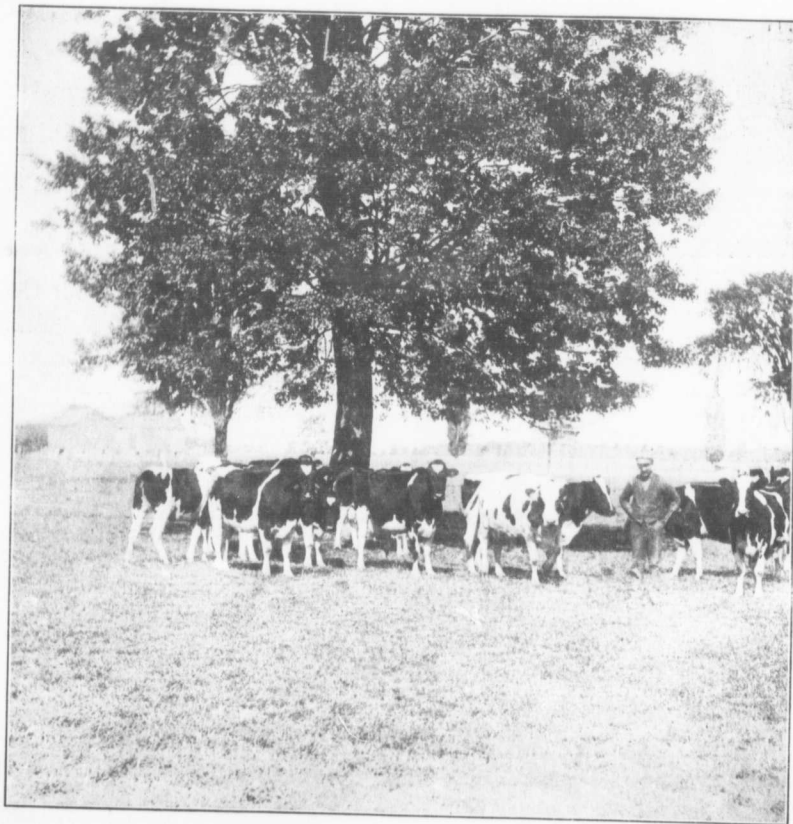


DEVOTED TO  
BETTER FARMING  
AND CANADIAN  
COUNTRY LIFE



Toronto, Ont. April 5, 1917

Comm. of Conservation  
Jan 13  
Asst. Chairman



IN PASTURES GREEN—A SCENE IN WESTERN ONTARIO.

Address all Correspondence to

ISSUED EACH WEEK

ONE DOLLAR A YEAR

**WE WILL  
HELP YOU  
GET THIS CROP**

**WE'LL HELP  
YOU WITH SEED  
AND LABOR**

**Why not get 20% MORE GRAIN Per Acre in 1917?**

"More grain—more grain"—the Empire Calls. This year, 1917, must be one of supreme effort in the British Empire. You Ontario Farmers are called upon for a 20% increased grain crop. It is sorely needed. You can get it without extra labor. Let brain power help you out.

## Fan 3 Bushels of Grain to Get 1 Bushel of Seed

"What's the first thing to do to get your seed right?" a successful Ontario farmer was asked. "Use the fanning mill," said he. "Alright, then what?" "Use the fanning mill," he replied. "Well, and after that?" "Use the fanning mill," was the answer.

Prices for your grain crop will probably be abnormally high this year. Are you willing to help the Empire in her life-and-death struggle by producing more food stuffs?

Remember, you go through practically the same labor in sowing weak, dirty seed that you do in sowing clean seed. And—remember—practically the same labor at harvest. CLEAN SEED—there's the answer to the 20% increase.

Perhaps you have not been able to get pedigreed seed. If you can get it—pay the price. It will pay YOU again and again.

Otherwise—we suggest this: Go to your granary, select three times the amount of grain required for seed purposes. By use of the fanning mill, clean it once—clean it twice—clean it three times, or until you have just sufficient for seed purposes. If you want 100 bushels of seed you should fan it out of 300.

Use proper sieves and plenty of wind in the mill, and the one-third part remaining will be the largest and plumpest seeds which are naturally the most vigorous. Vigor in seed is just as important as in live stock.

This may seem troublesome. Perhaps it is. But do it for your Country's sake. Do it for those gallant Canadian lads in France. If for no other reason do it because it will pay you more handsomely than anything else you can do.

Two bushels of oats will sow an acre. The extra return from good seed will be from 5 to 10 bushels per acre—decidedly more in some cases. Supposing it brings only 60¢ per bushel. There's a pretty safe extra \$6 per acre—with practically no extra labor either at seeding or harvest.

Twenty per cent. increase from clean seed is not guess work. It's a proven, scientific fact.

Just think of the enormous extra tonnage that will go to help defeat the barbarous Hun—from Ontario:

Yield 1915.		20% Increase 1917.	
Bushels.		Bushels.	
Wheat .....	28,175,960	Wheat .....	33,812,352
Oats .....	120,217,352	Oats .....	144,261,542
Barley .....	19,893,129	Barley .....	23,871,755
Peas .....	20,430,490	Peas .....	24,516,588

A mighty stroke for the Empire. Remember, it's a food struggle as much as a military one. The best fed Empire is the one most likely to win.

More labor is coming—we are getting you thousands of enthusiastic helpers from amongst the business men, retired farmers, high school boys, town and city women, etc., etc. Last week's advertisement in this paper told you all about it.

## Get the Smut Out of Your Oats

Many tens of thousands of bushels of oats are lost annually, due to the ravages of smut. This waste can be largely eliminated by proper treatment of the seed.

Secure 1 pint of formalin for every 20 to 30 bushels of oats required for seed purposes. Dilute with 42 gals. of water and use a barrel in which the bags of grain may be immersed for 20 minutes. Spread out to dry and then place in new bags or in bags that have been treated in a similar manner and thoroughly dried, thus preventing recontamination.

Consult the nearest District Representative of the Department of Agriculture if you are not familiar with this work, or communicate with the Department of Agriculture at Toronto. We are keen to help you with labor—with suggestions—with the names and particulars of those who have seed for sale—with advice on any point that may be troubling you. Don't hesitate to write us fully at any time.

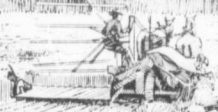
**Ontario Department  
of Agriculture**  
SIR WILLIAM H. HEARST,  
Minister of Agriculture  
Parliament Buildings  
TORONTO



ONTARIO

**The Empire calls for bigger GRAIN CROPS from ONTARIO**

**DON'T PUT  
UP WITH  
THIS THIN  
CROP**



**CAREFULLY  
SELECTED  
SEED WILL  
PREVENT IT**

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# FARM AND DAIRY

## & RURAL HOME



We Welcome Practical Progressive Ideals

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

VOL. XXXVI

TORONTO, ONT., APRIL 5, 1917

No. 14

## The Milking Machine—An Experience Meeting

### Eighteen Months Experience

JAS. R. ANDERSON, Prince Edward Co., Ont.

**W**HEN I installed a Sharples Milker and used it about one year and a half before our barns burned. We found it quite satisfactory. We are installing a new Sharples Milker now. Possibly the Sharples costs more to install than any other make, but once you get it in you have an outfit that will cost you very little to keep in repair. We used ours one year and a half and the cost for repairs was practically nothing.

We had four single units and two men would milk 30 cows in about one hour. If we were milking by hand it would take five milkers to milk them in one hour. A man that keeps 10 cows or more would make no mistake in buying a mechanical milker. Any dairyman, however, who is not a good, clean milker by hand, and is inclined to be careless, should never have a mechanical milker; above everything else the machine must be kept perfectly clean and well looked after in every way.

When we installed our milker we had a contract with the Hullville Creamery to furnish sweet cream from the creamery for table use in their city trade. We never had a complaint after we installed the milker. But we took every precaution we possibly could to keep everything perfectly clean.

### Machine Milked Champions

G. A. BRETHEN, Peterboro Co., Ont.

**A**LTHOUGH virtually compelled by present conditions to install a milker (or materially decrease my herd, a sacrifice I was loth to make after breeding, developing and specializing on a couple of families that were proving very promising), I did not do so without careful consideration of the possible injurious effects on a herd of valuable producers, the possibility of decreased production and the question of any material saving of time in an average herd of 12 to 20 cows. I therefore took every means available to not only learn something of milkers in general, but also of the virtues and defects of the different machines upon the market. After a careful can-

vass of the experience of several well known breeders in whom I had every confidence, who were using different types of machines, to my surprise I learned with but one exception every man was an enthusiast for the particular make of machine he was working with. It would seem that when properly operated, almost any of the different machines on the market will give a good account of themselves if the proper care and attention is given to keep the machine in proper working condition.

While our experience with milking machines is too limited to say that any particular machine can claim superiority over all others, we have found the one we are using, the Empire, doing the work as satisfactorily as we had hoped for, and, in our judgment, reaching a state of perfection in performing the work it is intended to do quite approaching that of our other farm machines that we have long looked to as an absolute necessity upon the farm. While 10 months' experience with the milker we believe to be rather short to go wildly enthusiastic over a machine, I may say that as several of our cows have now freshened for the second time after having been milked with the machine for a season, we are in a fair way to judge of effects upon the herd.

### No Injurious Effects Whatever.

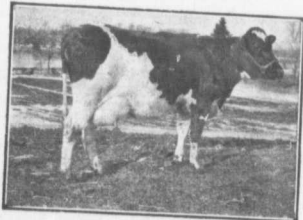
In the past year we have had no lost quarters or serious cases of garget, etc. On the contrary, we find the cows' udders in better shape than a year ago. While, with one or two exceptions, we

found the cows' production showing an increase after installing the milker, we have this season been getting splendid results as the first five we have had freshen in official test have averaged over 30 lbs. of butter each (three of them three-year-olds with second calf), and all have milked above 92 lbs. in best day. The five averaged over 96.5 lbs. in highest day. As some of these had been milked by hand as well we were in a good position to judge of the efficiency of the machine. Three of the five showed a marked increase over the hand milking, one three-year-old breaking the Canadian record for milk in one day, seven-day and 30-day period, and raising 30-day butter record from 125.24 lbs. to nearly 135 lbs., her best seven days for milk and butter being made by the milker. Somewhat similar results were obtained upon two more while No. 4 remained about the same and the other did not seem to respond quite as freely to the milker as to hand milking, although she is hardly as uniform in her milking as the others in any case.

### Sacrifice Speed to Efficiency.

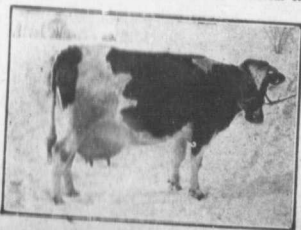
Some conclusions I have reached: It pays to sacrifice speed to efficiency. Time taken to set the cow's milk "down" before attaching the milker results in a more rapid flow of milk in the machine with, we believe, consequent ease on udder and greater production. A little moving up and down of the teat cups on the udder before attaching also serves to draw milk more cleanly and make a more perfect job of it. We haven't much faith as yet in the claims of any machine milker to do the work so perfectly that no stripping is required. In fact, the most serious objection I heard against any machine was from a user of one supposed to milk the cow dry. Again, I think if as in many cases there is only a cupful left, it is time well spent with valuable cows at least to push on machine to another cow a little earlier and draw the last by hand. While we have seen no injurious effect from milker being on a little longer than it should, still it is a waste of time and the hand milking proves a check on the machine, so you know exactly just the condition of your cows and can govern yourself accordingly.

(Continued on page 28.)



### CHOICE HOLSTEINS—MECHANICALLY MILKED.

These three cows are descendants of "Rauwerd," the 29,000 pound cow. Above is a daughter of Rauwerd, with a record of 34.66 lbs. of butter as a sr. 3-yr.-old; to the left a daughter's daughter with 27.77 lbs. as a sr. 3-yr.-old, and to the right a daughter's daughter's daughter with 30.10 lbs. as a sr. 3-yr.-old. These cows are all owned by G. A. Brethen, Peterboro Co., Ont., who does not hesitate to use a mechanical milker on them. Other breeders of pure bred cattle testify in this issue of Farm and Dairy that the mechanical milker is now an approved success.





The Milking Herd at the Asylum for the Insane, London, Ont.

## What Type of Corn Do You Grow?

It's a Choice Between More Silage or Richer Silage

WHEN corn was first grown in Canadian dairy districts, the large southern varieties were popular. These varieties gave

tremendous crops of big stalk corn. There were then no silos in the country, and as the large stalks could not be handled to advantage, public favor swung over to the smaller Flint varieties which attained a greater degree of maturity and were more relished by cattle when fed as corn fodder. In recent years the Dent varieties, yielding more ensilage per acre, have become very popular, and now, in the past couple of years, the whole question of choice of variety is again before the farming public, for, with the greatly increased number of silos, the old Mammoth varieties, once tried in Ontario and discarded, are again finding advocates, and among the very best class of dairy farmers at that. An out-and-out advocate of large southern corn is Mr. D. B. Tracy, Holstein breeder and farmer, of Cobourg, Ont. In reply to an enquiry as to the variety of corn that he prefers Mr. Tracy writes Farm and Dairy as follows:

"For the last five years we have been growing a variety of corn called Eureka ensilage. When the object is to raise a great tonnage on a small acreage, it cannot be beaten. In a good corn year we have filled two 12 x 30 foot silos and one 10 x 30 feet, re-filling all the silos three times off 10 acres of corn. In many places the corn was over 15 feet tall and the stalks larger than a man's wrist. Where the object is to have plenty of succulent feed the year round, and make up for the lack of cobs by a heavier grain ration, which we do here, I think this is the right variety to grow.

"We drill our corn in

rows three feet six inches apart, dropping the kernels about four inches apart in the row. We have found only one binder that will cut this corn for us, and it is a type used in the corn belt of the United States."

### Mr. Mallory's Practice.

Mr. F. R. Mallory, of Frankford, who will be best known to Farm and Dairy readers as the man who has bred and developed the May Echo strain of Holsteins, advises a half-way course in the selection of corn varieties. "Our Western Ontario corn men," he writes, "have been striving for early maturity. They have made wonderful strides towards success, so far as maturity is concerned, but they have done it at the expense of stalk. I find that Wisconsin No. 7, for instance, is not as large in the stalk as it was five years

ago, but earlier in maturity. It does not fill the silos fast enough. White Cap Yellow Dent is worse yet. Leaming is not quite so bad. To offset this tendency, I have been growing for two years an American corn called Eureka ensilage. It will yield three tons to one of Wisconsin No. 7, but it is shy on ears. To offset this, we have been using one-half of each and planting in alternate rows but not mixing seed. We have had this corn 16 feet high with ears 10 feet from the ground. Sounds big, but can be vouched for by our district representative, A. S. McIntosh, of Stirling.

"We use hills or drills

according to the cleanliness of the ground. Drills give a little bigger yield, but you never can properly destroy weeds."

As Hy. Glendinning

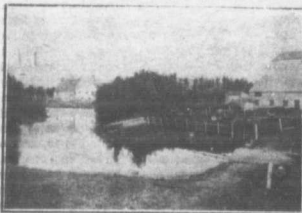
Sees it.

Mr. Henry Glendinning, well known to all Farm and Dairy readers, considers proper degree of maturity as one of the first

requisites of good ensilage corn. He states his position as follows:

"Of late years we have been growing Leaming and Wisconsin No. 7. These varieties mature at the same time with us, some years sufficiently for seed, but not every year. They will average nine to 10 feet high. There is more leaf on the Wisconsin than the Leaming, and a bigger cob. We have not noticed any tendency for these varieties to go all to grain, and we generally secure our seed from Essex county. I grew the large southern varieties 35 years ago; had them 15 feet tall and actually had mature ears. This, however, occurred only once, and was due to the hens thinning out the corn and no fall frosts till well on in October. When it came to growing corn for profit, however, we had to abandon the southern sorts, as there was not a silo in the province at that time. With the introduction of the silo we changed from Flint to Dent corns, but even with the silo I would not yet like to adopt southern corn. We are always partial to getting a good supply of grain in our ensilage. It reduces the ration of purchased milfeeds that we have to feed. I may be wrong in my analysis but I prefer a richer silage from the smaller corn."

Here are three diverse opinions from three successful dairy farmers. Fortunately all three meth-



"Where the Salt Sea Breezes Blow."

The dairy barns on two Nova Scotia farms, the property of the Semple brothers, Colchester County. The water is an inlet of the sea.

ods can be tested side by side without extra expense, and every farmer decide for himself just what types of corn are most profitable under his special conditions.

## Silage Crops for Nova Scotia

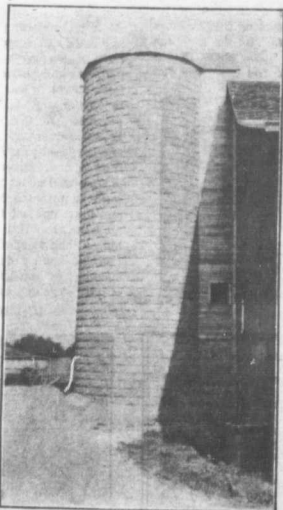
A Comparison of O. P. V. and Corn Silage

PROF. J. M. TRUEMAN, N.S.A.C., Truro, N.S.

ALMOST every gardener in Nova Scotia grows with success the common Canada Yellow, or one of the sweet varieties of corn for domestic purposes. Corn has been grown for ensilage on the College farm at Truro for something over 20 years, but at the end of this period we would hesitate to recommend farmers throughout the greater part of the province to build silos and grow ensilage corn. The seasons are generally too short. Looking over our results for a period of over two decades, I find that only about one year in four have the ears of such varieties as Compton's Early or Longfellow reached the glazed stage.

The best success has been obtained with the Flint varieties, such as Compton's Early and Longfellow, but so frequently have these comparatively early sorts failed to come to maturity that, for a number of years, the farm manager has made a practice of planting from one-third to one-half of the acres grown with the common Canada Yellow. The mixture of this well matured corn with the larger growing but less matured varieties, has proven very satisfactory. The average yield, however, has only been about 12

(Continued on page 8.)



A Sentinel of the Modern Farm.

## In Training for Future Responsibilities

Sons of Prominent Breeders Who Are Laying the Foundation of Future Success

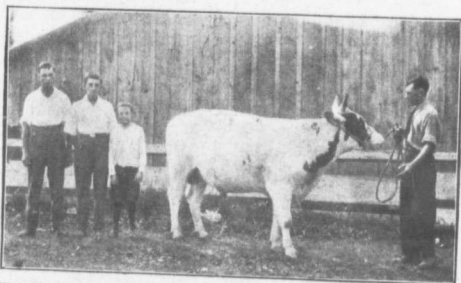
"OUR sons." What a pride parents feel in the young chaps as they develop in knowledge and stature. Their lives fairly centre around the lads. They want to give them the best of opportunities for development. Perhaps they desire to spare them much of the hard and rocky road that they themselves had to travel to attain the independence they now enjoy. Perhaps in their desire to spare their children, they are not altogether wise. Too much hard work is never to be commended; it would dull the brightest intellect and is the surest way to kill all ambition and initiative. A moderate amount of work however, is good for the boys, and a certain amount of responsibility is necessary to their best development. Where can we find the happy medium between too much work and too little, and just how much responsibility should the growing boy be allowed? This little story has to do with the families of a couple of Our Folks wherein the boys are given the responsibility for certain parts of the business according to age and talents; such responsibility as is the birthright of every Canadian boy and girl.

Our first illustration we will take from the old province of Quebec, where R. R. Ness has developed one of the finest herds of Ayrshire cattle on the continent, and has around him a fine bunch of growing boys. Earl, the eldest, has always been interested in his father's valuable herd, and particularly in their preparation and treatment for and on the showing circuit. When 14 years old Earl went as assistant to Wm. Gibson on a tour of the western Canada fairs. The education and experience gleaned on this trip has enabled him to take complete charge of this well known exhibition herd ever since. This is no small responsibility, as the animals are worth thousands of dollars, and require the most expert care, that they may always be at their best when brought out before the Judge. It means much in time, work and ability to see and execute the things which have to be done without referring them to other shoulders. The success that has followed the Burnside herd at the leading Canadian exhibitions is the best evidence of Earl's successful management.

For further proof of the ready response of boys to this training, the case of Earl's two brothers

might be cited. On one occasion it was impossible for Earl to get away to take the herd to Valleyfield Fair. Bruce and Douglas, 15 and 11 years, respectively, made the entries and took a carload of animals to this show, with the result that most of the prizes came their way. In speaking of the younger boy, the father said, "He is more useful at the shows than a maa, because he is so interested." These boys now have almost complete charge of the herd and each own some choice young animals in their own right.

Travelling over much the same annual show



Will Their Names be Written Large in Ayrshire History of the Future? They are making a good start. Holding a show Ayrshire that he had fitted himself as Earl Ness. The other three lads, from left to right, are Willie Hume and Bruce and Douglas Ness. They are in training for future responsibilities as the adjoining article abundantly testifies.

—Photo by an Editor of Farm and Dairy.

route of the larger fairs as the Ness herd, is another Ayrshire herd in competition with them, which is managed by the younger members of the family. In 1906, Thomas Hume, son of Alex. Hume, Northumberland Co., Ont., went with his father for one week on the Ontario show circuit. The following year the second boy Willie, had his turn with the herd. For several years these two boys were with the herd for part of or for the whole circuit, picking up things of value and learning the business from end to end. In 1914, when they were 18 and 16 years old, they took entire charge of the herd at several of the leading shows, including the Winter Fair at Guelph. That same season, Thomas, the elder, took three cows to Ottawa Winter Fair and won first, second and third prizes in their respective classes. Since then the boys have been responsible for most of

the show work, and in the absence of the father and one son at the shows, the other boy has had the added responsibility of the farm at home. This last autumn, Thomas, who is sergeant in the 255th battalion, was not able to follow the herd, but Willie, now 18 years old, took charge, with the assistance of a cousin, R. N. Bissonnette, 16 years old, who had been helping for the last three years. The animals they showed won several championships at Toronto, including the herd championship.

The question might be asked if the risk was not great in allowing boys so young to control and manage animals so valuable? In answer to this, let me quote Mr. Hume, who wrote to Farm and Dairy on this point: "I had no fear but that they would manage all right." This confidence in their sons' ability must be a great fund of comfort and pleasure to the parents, especially so when they realize that the business for which they have fought, worked and denied themselves, is going into the hands of their own lads with every prospect that under their management it will not only maintain the high standards of the past, but, better still, establish new ones.

### Ayrshires in Quebec

J. C. CARTER, N.Y. State.

THREE years ago I ran to Montreal with a touring party by motor car. We passed through Howick, Ormstown, etc., and I am prone to confess that I never saw better farming country. I certainly never, no, not even in the best districts of my own state, saw such splendid buildings and such general evidences of prosperity. The farm buildings were generally painted. The fences were good. I did not need to be told that it was a dairy country. Such prosperity is found nowhere else. And being of Scotch descent, I was more than pleased to hear that it was an Ayrshire country.

At Howick I got in conversation with a young chap who readily confessed to being a farmer and an Ayrshire breeder. "Yes," he said, "Ayrshires are what put this place on the map. We have sold stock to go all over America. We send carloads of grade Ayrshires, to dairy farms in the U. S. Ayrshires have lifted the mortgages from our farms, built our home and given the most of us a competence."

Now, what do you know about that! Talk about confidence in a breeder! And, say, isn't confidence in our line, whether it be hardware or cattle, one of the principles of success?



A Typical Pasture Scene in a District where Good Ayrshires and Lots of Them are the Rule—the Chateaugay District, Quebec.

—Photo on farm of Jno Logan, Howick, Que.

## Sweet Clover as Silage

Looks Like Molasses and Tastes Good

J. H. PURVIS, Ontario Co. Ont.

THE first week in June, 1916, we cut six acres of sweet clover. This was a good crop, fully three feet high and as thick as it would stand. Weather conditions were unfavorable for curing hay, and we put four acres in the silo, making a bulk of 12 feet in a 12 foot silo. The clover became too dry before we finished filling the silo, and we were afraid it would fire again. We found, however, that where the air was kept a way from it, it kept as perfectly as corn silage. We expect to put seven acres in this year, but will aim to have it placed in silo the same day as it is cut in the field.

When the silage is taken out it looks like molasses meal, and has a sweet odor and is dark brown in color. The stock eat it readily. The best results were obtained by mixing corn silage and sweet clover silage together at the rate of 40 lbs. of corn to 30 lbs. of clover. A number of farmers are sowing sweet clover this spring with the object in view of mixing it with corn when the silo is being filled. We believe this to be an excellent idea, as the carbohydrates in the corn would insure the keeping of the clover and would be practical for the man with one silo. It would also help for the following reasons: (1) The cutting down of the corn acreage would save labor; (2) the clover being rich in protein makes it a very economical feed; (3) the roots make an excellent fertilizer, and as they decay rapidly in the soil, plowing operations are easy even in dry weather; (4) we figure that 30 lbs. of sweet clover silage equals 12 lbs. oat chop. If eight tons of green weight can be produced on an acre, an idea can be gained as to its feeding value.

## Believes in Sweet Clover

But Advocates Sowing It Alone

"SWEET clover is coming into its own as a roughage on the farm," said Mr. W. C. Hogg, Ontario Co., Ont., as we chatted over the feed situation in Uxbridge recently. "But it must be sown alone," he continued. "I started sowing it two years ago, using a mixture of two pounds each of red clover, timothy, alsike and sweet clover. I have found out, however, that it is a mistake to mix it with these other hay crops. Not that it would yield well when sown with them. Last year we got 36 tons of this mixture from 10 acres at one cutting. The animals eat it all right, the horses in particular seeming to relish even the large woody stalks. I believe, however, that it would be better feed if sown alone, so that it would be out earlier in the season than when it is sown in mixture, where the cutting is deferred until the usual time for mowing the other crops.

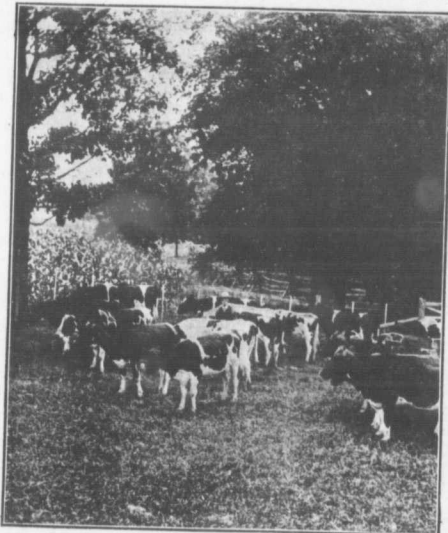
"Last year we sowed 16 acres of sweet clover using 18 lbs. of seed per acre. It came on fast and by harvest time had made such a strong growth that there was about one foot of it in the butts of the oat sheaves. For this reason the oat straw from the field in which it was sown is making better feed for our stock this winter. We are looking for great things from sweet clover. We expect to get two crops from it, the first one cut about the middle of June before the stalks get large and woody, and the other about silo filling time. It is our intention to try mixing it with the silage next season."

Mr. Hogg prefers sweet clover to alfalfa because the seed is comparatively easy to obtain. Obtaining good seed is almost an impossibility with alfalfa this year. He also claims that it is easier to get a stand with sweet clover in his district. Last year the fields seeded were so badly waterlogged that the oats killed out, but the sweet clover came along as well as could be expected even in the most favorable of years.—R. D. C.

## Intensive Farming at Ottawa

More Than a Cow to the Acre

WHEN we speak of intensive farming, we usually think of the thorough working of a small area. A large farm, however, may be as intensely worked as a small one. The Central Experimental Farm at Ottawa is an example.



Ideal! A Good Herd, a Pasture with Shady Corners, Corn for the Silo in Background. Alfalfa is also grown on large Acreage.  
—On farm of J. W. Richardson, Haldimand Co., Ont.

On this farm of 190 acres are maintained 180 head of cattle, 84 sheep, 175 hogs and 30 horses. The greater part of the feed for this stock was produced on the farm. "How do you do it," an editor of Farm and Dairy recently asked Mr. Grey, the farm foreman.

"We depend on pastures practically not at all," said Mr. Grey. "We have lots of silo capacity, grow lots of corn and feed ensilage twice a day practically the year round. Occasionally we feed green peas and oats as a change, and occasionally green alfalfa. We have a piece of alfalfa near the barn. We cut some of it four times last year. I wish we had kept track of the yields on that small area; it was enormous. All of this feeding, of course, is done in the stable, and along with the succulent feed we give a little grain through the whole summer season."

Mr. Grey informed us further that they will have 150 tons of hay left over this year, but that they bought some timothy hay for the horses. At the time of our conversation, early in March, they were just starting at Ottawa to use the 1916 crop of ensilage. This is intensive farming as they do it in older lands.

## Why Not a Grade Bull?

There Is Always the Danger of Reversion

By "HERDSMAN."

"WHY not use a grade bull?" I have often been asked this question, and frequently the views of the questioner were backed up by some pretty substantial figures. For instance, at the National Dairy Show at Chicago a few years ago I saw exhibited the grade Guernsey cow "Jerry," bred in Wisconsin. Her record was 15,744 lbs. of milk and 729.85 lbs. of butter fat; over 900 lbs. of butter as our Holstein friends figure it. Thousands of pure-bred cows with pedigrees as long as a city sidewalk have no such records as this to their credit. In fact, there are few pure-bred cows of the Guernsey breed that have done better. As an individual, too, "Jerry" was a wonderful cow—dairy temperament, wonderful capacity and beautiful to look at. And many who looked at her would have jumped at the chance to have gotten one of her bull calves had they then been in the land of the living.

"Jerry" inherited her wonderful performing powers from her ancestors. Her blood was from two sources; one fountain was a long line of pure-bred sires of the richest breeding; the other source was a common scrub or native cow back in the early days of Wisconsin breeding, and back of that scrub was a long line of scrubs; just as long a line of scrubs as there were aristocrats in the family of "Jerry's" sire. In "Jerry's" veins flowed these two lines of breeding. In her progeny either line might come to the front. Here would be the danger of using a grade bull even from so good a cow as "Jerry." In a good strain of pure-bred cattle there is no scrub blood to assert itself. Hence the greater propensity of the pure-bred sire. And viewing the question in the larger light, I never saw a good herd of grade dairy cows that had been developed by the use of grade bulls. Did you?

## Our Experience With Grimm

It is Ideal for Our Climate

W. O. MORSE, Halton Co., Ont.

WE have been growing alfalfa on a small scale for many years, and almost with unvarying success. In dry seasons our crop may be shorter than in seasons when conditions are more favorable, but always there is a good paying crop of hay to be harvested. Our oldest stand at present was seeded eight or nine years ago on a steep gravel bank that did not seem to offer a hospitable seed bed for any crop. Last season the first cutting of alfalfa must have yielded almost four tons to the acre. The variety, I believe, is Ontario variegated, a good variety, but now we believe we have found a better one.

Three years ago we purchased our first seed of Grimm alfalfa, just a couple of pounds, and seeded it in drills 32 inches apart. The first season we cultivated and weeded just as we would a hoe crop. The latter operation was reduced to a minimum by thorough summer following up to July when the seed was sown. It made a good growth and came through the winter in perfect condition as it has come through every winter since. This is the greatest merit that we see in Grimm

(Concluded on page 8.)

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# Every Cow a Profit Maker

Our Herd Accounting System Insures This—*Ey J. Lee Alexander*

**W**E keep an account with every cow in our herd. We know just exactly what each one is worth to us. When Mr. Edwards and myself started farming at Hillhurst, Que., 15 years ago we did not have much experience. Ours was then a mixed herd of almost all breeds. We decided, however, that as neither of us had much experience in dairy farming to adopt a system in regard to our cows, that would keep the unprofitable ones out of our herd. We, therefore, procured a Babcock tester and a set of scales, and adopted a rule that every cow that would not make a profit of at least \$25 above the cost of her

During haying, all hay suitable for dairy cows was stored by itself, and measured. Each cow was charged with her proportion. This also applied to the ensilage. We took our hay at the highest price paid in the locality, and counted our ensilage at the rate of 2½ tons at the same value as a ton of hay. The roots were measured and fed. The concentrated ration was made up of home-grown grains, ground, and other meals, such as bran, cotton seed meal, oil cake meal, gluten meal, etc., bought and mixed to make a balanced ration. This mixture was fed to the cows at about the ration of seven pounds for each

pound of butter fat, when the hay was mostly timothy, and less when clover. We had a sheet with each cow's name and the amount she was receiving over the meal box, and whenever it was necessary to change a note was made of this, and at the end of the month the amount footed and charged up in the ledger.

In this way we knew how each cow was doing and it is needless to say changes came often for a number of years.

After three years we increased our profit required to \$50, and think this is plenty low enough. Any cow that fails to show this amount (without some good reason) on the credit side of the ledger goes for beef. Our herd has increased from 25 at the beginning to from 60 to 90 milking cows, and the average production from a little less than 200 lbs. first year to 456 lbs. of butter for 1916, and the net profit per cow from \$17.50 to \$90.60.

It was through our cost accounting system that we came to notice the difference in profit between the high and low testing cows and on that ground I take exception to the R.O.P. standard for Jerseys. Too much emphasis is placed on milk. In our herd we had cows showing a yearly net profit of \$125 that could not enter the R.O.P., while others that could, we were selling for beef. This is something which our records have established to our satisfaction, anyway, that where the profit is based on the Babcock a high testing cow is



A Few Members of the Jersey Herd of A. H. Menzies & Sons, Pender Island, B.C.

more profitable than a low testing one. I have yet to own a cow that will make 500 lbs. of butter as cheaply from 12,000 lbs. of milk as one that will make it from 8,000 lbs., and right here I would like to call attention to dairy type.

### We Show Our Producers.

All of our most profitable cows are those that would please the eye of a dairy judge, and instead of the blue ribbon cows giving a man the blues, ours are the most profitable in our herd. We note with pleasure as the typey showing cows get more numerous, our net profit per cow increases.

In regard to the time required to do the book-keeping I am sure I cannot say as for the first 10 years I did it all myself after my day's work, but for the last five years I should say that the time taken for all extra work about the dairy, that is, the work that the average farmer does not do, might require one day per week, but any one who tries it for a year or two will agree with me that it is the most profitable work ever done on a farm. Perhaps a copy of one of our cow's accounts for six months might be of interest. I am sending that of Gentle Fern, 6339. This cow has won more first prizes and grand championships than any other female we own. She has been shown all over eastern Canada for the last two years, and has only been placed second once, and that to her stable mate Imp. Brampton Petal, No. 2699, who won over her at Sherbrooke last fall. This very promising young four-year-old has a record of 405 lbs. fat in her first or two-year-old lactation period, and will certainly make a large record this year if nothing prevents. Gentle Fern dropped a calf on the fair grounds at Quebec August 25, 1916, the next day winning first and grand championship. She was shipped from there to Sherbrooke, and from there home, on September 5th. She won a little over \$80 in individual prizes, besides being one of the winning mature herd at every exhibition shown. The record she has made will be the best proof we can offer that we milk our show cows, and show our milkers.

The high price of potatoes is due to a worldwide shortage, not to illegal combinations among growers and dealers. Prosecution of potato exchanges and imposition of an embargo on exports could not, therefore, reduce prices to a normal level. The most notable effect of such drastic measures would be to discourage production another year.

A SAMPLE PAGE FROM THE HERD LEDGER

Showing how Mr. J. Lee Alexander, Hillhurst, Que., keeps accounts with each cow in his herd.

Gentle Fern.

1916.	DR.	1916.	Milk.	Test of	CR.
				Butter Fat.	
Aug. 6	day meal.. \$1.09	Aug. 23,	dropped	caif.	
Sept. 31	day meal.. 6.62	Sept. 1,	228 2-5	6%	14.62 @ 36c.. \$5.11
Oct. 1	day meal.. 5.40	Oct. 1,	1,234	5.8%	85.37 @ 33c.. 28.52
Nov. 30	day meal.. 5.67	Nov. 1,	1,144 4-5	6.2%	82.98 @ 42c.. 34.86
Dec. 31	day meal.. 5.00	Dec. 1,	909	4.8%	72.32 @ 43c.. 31.10
1917.					
Jan. 31	day meal.. 6.89	Jan. 1,	887	6.6%	68.48 @ 44c.. 30.14
Feb. 28	day meal.. 6.73	Feb. 1,	813	7%	66.58 @ 42c.. 28.06
Pasture from Sept.		Feb. 25,	777	7.2%	65.38 @ 45c.. 29.42
10 to Oct. 22..... 1.50					
1 ton hay..... 7.00					
2½ tons ensilage... 7.00					
1,000 lbs. roots... 2.50					
		\$193.21			
		\$55.70			
		\$137.61			

feed for a year could not stay in our herd. At that very modest demand we had to replace 22 out of 28; and this herd was considered one of the best grade herds in this locality.

Our method of bookkeeping was to keep a cow ledger, each cow having a page and being credited with what she produced and charged with what she consumed. Her milk credits were tabulated on a sheet of cardboard ruled into 31 squares, each divided into two parts for morning and evening milking. In this way we kept record of every pound of milk produced by each cow. A sample from four milkings taken each month was tested and the amount of butter at the selling price credited each cow. I will add that we made our own butter, and the variations between Babcock and churn carefully noted, and amounts subtracted or added as the case might be, but on the whole there was very little difference after adding an 18 per cent. overrun.



Black and White Cattle will Always Find Favor Among City Milk Producers.

## FARM AND DAIRY

April 5, 1917.

## Silage Crops for Nova Scotia

(Continued from page 4.)

tons per acre, the Compton's Early and Longfellow giving about 15 tons and the Canada Yellow eight to 10 tons.

## Corn Desirable in Some Districts.

In the Annapolis Valley and in some of the counties along the South Shore of Nova Scotia very much better results have been secured than at Truro and in the eastern parts of the

province. In the more southern parts of the province, the season is longer and fall frosts are often delayed a month or more after they have destroyed the corn of the province. In those parts of the province corn for ensilage purposes is grown in larger quantities each year and should be increased at a much faster rate. Last summer a farmer in the vicinity of the Agricultural College grew White Cap Dent from seed which he secured from Ontario, and we were

quite surprised to see a little larger growth and more maturity than in the flint varieties which were grown on the College Farm. It is our intention to grow some of this variety next year. For several years, we have made the attempt to grow our own seed corn and so aim to breed up an acclimated variety. Unfortunately frosts have regularly interfered with the progress of this work.

O. P. V. Ensilage. Recognizing the uncertainty of the

corn crop for ensilage purposes, we grew last year on the College Farm some five acres of peas, oats, and vetches, which was cut and put into the silo. This crop yielded at the rate of about 11 tons per acre and contained when put into the silo 23.2% dry matter, in comparison with 13% of dry matter in an adjoining field of corn which yielded at the rate of about eight tons per acre. The labor expended upon this crop was less than half that spent on the corn and the ensilage produced is now being fed most satisfactorily. At the same time we are of the opinion that this crop will prove a most valuable, possibly the most valuable, ensilage crop which can be grown in the Eastern and Northern parts of the province of Nova Scotia.

The complete analysis of the ensilage from oats, peas and vetch and from the corn is given below:

O. P. V. Silage Corn Silage			
Water	.....	71.85	80.00
Protein	.....	2.31	2.37
Carbohydrate	.....	23.42	15.33
Fat	.....	.....	.58
Ash	.....	1.59	1.41
		100.00	100.00

It will be seen from this analysis that the oat, peas and vetch silage contains 25.56% of total nutrient, while the corn silage contains only 18.55%. The yield of dry matter per acre was 6,193 lbs. on the oats, peas and vetch and 2,200 in the corn silage. It is true that this was a poor corn year, but it shows the condition in this section about three years out of four.

The protein in the oats, and peas is not any higher than in the corn, which is surprising at the first glance. It will be noted, however, that the corn was very green and evidently contained more nitrogen than would be the case for mature corn. This is due partly amide nitrogen and not as valuable as that in the mature corn. The protein in mature corn silage is about 1%. It would seem, therefore, that the oats and peas are more valuable for this section than corn.

The results of three years trials with O. P. V. and corn, 1914-16, have given us an average yield of nine tons of corn and 10 tons of O. P. V. per acre, with about eight per cent. more dry matter in the O. P. V.

The O. P. V. cures perfectly in the silo and the cows eat it as readily as they do the corn.

The O. P. V. is sown on grass land (clover and timothy seed) plowed in the fall. The seed is put in as early as the land can be worked—two bushels of oats, three-quarters of a bushel of Golden Vine field peas, and one-third bushel of common vetch. This is cut when the oats are just beginning to enter the dough stage, before much yellow shows in the straw. If left too late it will not pack well in the silo and will mould. We cut it with a mowing machine, pick it up as cut from the mower with forks, and haul it directly to the silo, where it is run through the cutter.

## Our Experience with Grimm

(Continued from page 6.)

alfalfa. As far as we can judge our Canadian winters and springs have no effect on it whatever. This is more than we can say for the variegated alfalfa, though it, too, is hardy.

The yield of the Grimm has been equally satisfying. When ready to cut (but we allowed ours to go to seed) one would not know that it was planted in rows, so dense was the growth. It stood against high all over the field; a better showing than we have ever had with any other variety of alfalfa. The cost of seed is still high, but if a stand will last for even six years the cost of seed per year is trifling; cheaper than

## Massey-Harris Service

## Talk No. 2.—A Helping Hand.

**S**ATISFIED Customers are the foundation of any permanent business. We have been in the business of manufacturing and selling Farm Implements for seventy years and are in it to stay. We have supplied three generations of farmers with their requirements in this line, and our steadily increasing business is sufficient proof that our Customers are receiving full value, both in the implements themselves and in the service rendered.

The past is a good index of the future—Massey-Harris Service will always be a prominent factor in the business.

Satisfactory service cannot be rendered by a middleman. He does not have the necessary knowledge and experience, and may this year handle the products of one factory and next year be handling a different line, so that no continuous service of any kind is to be had.

We are represented in several thousand towns and villages throughout Canada by Local Agents backed up by our factories and branches located at convenient points. In dealing

with one of our Agents, you are dealing with Massey-Harris Company, Limited, and should there be any change in your Local Agent, this does not in any way affect the situation, for Massey-Harris service is always available—right in your neighborhood there is a Massey-Harris Representative ready to extend a helping hand.

Is it not worth while to know that when you buy a Massey-Harris Implement it will be carefully erected, a reliable man will see that it is properly started, and that further service will be available at any time on short notice?

*In an early number of this publication we shall have more to say regarding Massey-Harris Service which is of such vital interest to every farmer.*

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There is more than one use for a telephone on the farm. Our handsomely illustrated book, "Canada and the Telephone," gives numerous uses. Send for a copy. It's free.

The Provincial Governments recognize the advantage of telephones in rural districts and practically all of them have done something to encourage the construction of independent telephone systems.

In Ontario, the Government has given municipalities the right to build and operate independent telephone lines. In Nova Scotia, the Government subsidizes independent rural telephone systems. In Saskatchewan, the Government lends its support. And so on.

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Our telephones are of the very highest quality and most modern design. Our construction materials are guaranteed first quality. Our prices are right. In many instances, we can do unusually well for our customers because we were fortunate to make large contracts some time ago at exceedingly favorable rates. The raw materials entering into the manufacture of telephone construction supplies have steadily advanced in price on account of the huge demands caused by war orders. There are certain independent local or municipal system should be sure to get our quotations before placing an order.

**Canadian Independent Telephone Company, Ltd.**

269 Adelaide St. W., Toronto

the seed coat might be for a less hardy variety.

Alfalfa is the ideal crop for much of our soil, which is stony. Every time the soil is stirred stony have to be picked and hauled off and cultivating operations are always hard on both machinery and horses. It is our plan to get the most of our land into alfalfa and leave it there as long as possible. We have to be sure of a more profitable or suitable crop.

### Experiments With Flax for Fibre

**D**URING the year 1915 a number of plots of flax were grown at the Central Experimental Farm, Ottawa, the seed having been obtained from Holland. The samples were pulled at various stages of ripeness, retted under water, and afterwards scutched by the Ontario Flax Co., Ltd. They were valued by an expert of the York St. Flax Spinning Co., Belfast, Ireland, but in no case could any of the samples be pronounced first class. This was partly due to their being insufficiently retted, but partly to the time of sowing, by the character of the season, and by the stage of ripeness when pulled. Accordingly, a number of experiments were planned for the ensuing year, 1916, to clear up some of the doubtful points and to determine—in so far as this was possible in a single year—whether the highest grade of fibre-flax could be successfully grown in Canada.

The seed used in 1916 was harvested from some of the plots sown with Dutch seed in 1915. The rate of sowing per acre varied between 1½ bushels and 2½ bushels of seed germinating 100 per cent. This means that where it was decided to sow 2 bushels per acre of seed with a germination of 100 per cent, and the sample of seed available gave, when tested, a germination of 80 per cent, it was necessary to sow a somewhat larger quantity than two bushels of the latter—as a matter of fact, two and one-half bushels.

As very early sowing is an important factor in achieving success should the summer turn out to be unusually dry (as actually happened in 1916), seven plots were sown on the 26th of April, one on the 28th of April and seven on the 12th of May.

The soil was a heavy clay and at the first date of sowing was rather wet, consequently it was decided to make several shallow trenches about six inches deep between some of the plots. For several weeks after sowing the wet weather continued with very little interruption, and the system of surface trenches undoubtedly saved the situation.

The crop was pulled on various dates between the 14th of July and the 27th of July, the capsules being fully grown. In some cases the seeds were pale in color and unripe; in others the plot was pulled when the first seeds on each plant were ripe; in those pulled last about half the seeds were ripe.

The average height of the seven plots first sown was 30¼ inches, and the average of the last seven was 29 inches.

The flax was put into water on the same day on which it was pulled, and was allowed to remain immersed from three to three and three-quarters days. It was then taken out and spread on the grass for a period of one to two days. The scutching was done by the same firm as in 1915; and the final report, made by the same gentleman who examined the previous year's crop, was as follows:

"The flax is a good length, well retted, and strong. It is the best flax I have seen in Canada yet. According to flax values here it should be worth 40c a pound or more."

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- Rennie's Market Garden Table Carrot . . . Pkg. 10c, oz. 25c, 4 oz. 75c, lb. \$2.25.
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- Glory Enkhuizen Cabbage (hard head) . . . Pkg. 5c, oz. 30c, 4 oz. \$1.00
- Rennie's Spinach Beet (for table greens) . . . Pkg. 10c, oz. 30c, 4 oz. 90c.
- Stringless Refugee Wax (Butter) Beans . . . 4 oz. 15c, lb. 50c, 5 lbs. \$2.25.
- Rennie's XXX Early Table Corn (sweetest) . . . . . Pkg. 10c, lb. 40c, 5 lbs. \$1.90.
- Davis Perfect Cucumber, for table or pickles . . . . . Pkg. 5c, oz. 20c, 4 oz. 50c.
- XXX Pink Skin Tomato, solid fruit, big cropper . . . Pkg. 15c, ½ oz. 35c, oz. 60c.
- Mammoth Green Squash, specimen 403 lbs. weight, Pkg. 10 seeds 25c.
- XXX Scarlet Round Radish (white tipped) . Pkg. 10c, oz. 20c, 4 oz. 50c.
- Quaker Pie Pumpkin, popular for pies . Pkg. 10c, oz. 25c, 4 oz. 75c
- Laxtonian Bush Table Peas, extra early . . . 4oz. 15c, lb. 45c, 5 lbs. \$1.90.
- Champion Moss Curled Parsley . . . Pkg. 5c, oz. 20c, 4 oz. 50c, lb. \$1.50.
- Select Yellow Dutch Onion Sets . . . . . lb. 35c, 5 lbs. \$1.70
- Rennie's Selected Yellow Globe Danvers Onion (black seed), Pkg. 5c, oz. 25c.
- Extra Early Red Onion (black Seed) . . . . . Pkg. 5c, oz. 25c, 4 oz. 65c, lb. \$2.10.
- Select Nonpareil Lettuce, large heads . Pkg. 5c, oz. 20c, 4 oz. 60c
- Giant White Feeding Sugar Beet, for stock . . . . . 4 oz. 15c, ½ lb. 25c, lb. 45c.
- Rennie's Prize Swede for table or stock . 4 oz. 20c, ½ lb. 35c, lb. 65c
- XXX Climbing Mixture, Nasturtiums . . . Pkg. 10c, oz. 20c, 4 oz. 50c.
- Sweet Mignonette, fragrant, large flowers . Pkg. 5c, oz. 25c
- Giant Trimardeau Pansy, all colors mixed . Pkg. 10c, ½ oz. 40c
- Spencer Choice Mixed Sweet Peas . . . . . Pkg. 10c, oz. 30c, 4 oz. 90c, lb. \$3.00.

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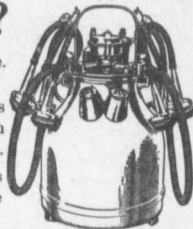


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A machine reaper of course. Why?

Primarily because it saves labor, and labor wages with labor-keep is extremely high.

That—the reaping of profits by labor saving—is only one reason for milking with



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Good for the Herd

One man, operating two 3-cow Burrell Milkers, milks 24 to 30 cows an hour, according to conditions, does the work of three hand-milkers.

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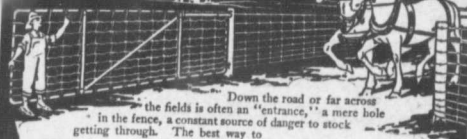
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## Canadian Dairying from Coast to Coast

The Dairy Outlook for the Season 1917

By J. A. Ruddick, Dominion Dairy Commissioner.

THE total value of all dairy products exported from Canada for the season of 1916 will exceed all previous records. When the final returns are available, the total value will be found to be approximately \$40,000,000, or about \$9,000,000 more than ever received before in a single year (1903) by the dairymen of Canada for the surplus exported.

Although the large increase in value is chiefly due to higher prices, there was a substantial increase in quantities as well. The exports of cheese will probably be the largest since 1908, although in the quantity was practically the same. The quantity of butter exported in 1916 was the largest since 1907, and the quantity of condensed milk exported was the largest in the history of that industry. All this shows an upward tendency in production at the present time.

With the production of butter in the Western Provinces now large enough to supply all local demands, any further increase in that section — and there will be further increases — means so much more export.

It is very gratifying to be able to say also that the quality of the Western butter has improved so much during the last two or three years that it is now preferred to the New Zealand article, and the small quantity of New Zealand butter which was imported during the past year has been very hard to sell in competition with butter from the Prairie Provinces.

The creamery industry continues to thrive in Nova Scotia, and while the growth is not rapid it is substantial, and is being built up on a good foundation.

I am pleased to say that we have never had so many inquiries respecting cow testing as we are having this spring. This indicates further improvement in production.

With the large decreases in the live stock of important dairying countries of Europe there is bound to be a good demand for dairy produce from Canada for some years to come, and those who find themselves in a position to maintain the present rate of production, or to increase it, have every reason to believe that they will get a good return.

The prevailing high prices have stimulated inquiry as to the relative value of different breeds, and milk and its products will gain in the estimation of the public, rather than suffer by any properly conducted investigation of this kind.

### Dairying in P.E.I.

THE 40 creameries and factories in Prince Edward Island last year manufactured butter and cheese to the value of \$51,000, according to statistics made public at the annual meeting of the Provincial Dairymen's Association held recently. This figure is the highest reached in the history of cooperative dairying. The value of butter was \$180,000. The value of cheese \$351,000, compared with \$265,000 in 1915. There was a falling off in milk manufactured into cheese of one million pounds and an increase in milk of 600,000 pounds, making a net increase of the milk of 400,000 lbs. The unusually high prices for butter and cheese, the former reaching 45c and the latter 22 1/2c, offset the shortage in the output.

At the annual meeting the shortage in the milk supply was discussed. It

was said to be due to the shortage of labor, owing to so many farmers enlisting and also to the abnormally high prices of raw materials, such as potatoes and oats, which led a number of farmers to follow this line of least resistance and give less attention to dairying.

From Eastern Ontario

G. G. Publow, Chief Dairy Instructor for Eastern Ontario.

PROBABLY dairymen have never had such favorable conditions surrounding the approach of a manufacturing season as those prevailing at the present time. Dairy products at any time, when of good quality, are always staple products and profitable commodities to produce. But seldom, if ever, in the history of Canadian dairying has the demand reached such proportions accompanied by such extraordinary prices. Therefore it seems most fitting that all those connected with this particular branch of agriculture should start the year with clear understanding of the needs of the industry and the opportunities awaiting the individual to secure for himself and his countrymen at large the most beneficial results.

It is already at this date none too early for producers and manufacturers to make a careful inspection of their building and equipments with the idea of placing them in a suitable condition for obtaining the best results. The Dairy Act of Canada states specifically that all places surrounding the production and manufacture of dairy products must be maintained in a clean, sanitary state, and it is the intention of those in charge of the inspection of these places to see that the regulations are complied with, even more fully than ever, because all have now had sufficient time to make necessary preparations or alterations.

Let us first refer to the work of the producer of milk at the farm, and without going into a long discussion of details we can touch at the most vital part by simply repeating what we have said in varying ways before, namely, that the farmer controls in almost every conceivable way both the quality and quantity of the manufactured products, by the manner and condition in which he produces the raw material, which in his business is clean, sweet milk. And let us repeat also, for it is not yet too late, for all dairymen to provide themselves with a supply of ice for cooling the milk immediately after it has been obtained from the cows. Dairymen can do no better work or send time to better advantage than in the proper cooling of milk and cream, to preserve its purity until it reaches the factory or creamery.

Factories, too, must in justice to themselves and their patrons, as well as in compliance with the laws of sanitation, put their equipment of manufacture in suitable shape for the assurance of cleanliness and efficiency in the manufacture of the finished products, and this should be done sufficiently early because it is still after the manufacturing actually begins the manager usually finds himself too busy with the daily routine of work to devote the proper attention to the condition of his equipment and plant.

In all probability meat and plant, if re-open early in the year, with the idea of securing the highest of spring prices, and these, no doubt, will be compromised with the usual temptation to send their goods to market before they are sufficiently prepared for the consumer; the old story of green cheese, one of the greatest errors resulting from the lack of forethought



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on the part of the men who suffer most from its practice. No effort should be spared to stop this most detrimental of all defects in our early spring proceedings. Let us much rather keep in mind that it is the actual consumer who decides the demand and therefore, prices for the products and it is he whom we must satisfy.

**The Western Ontario Outlook**  
Frank Herna, Chief Dairy Instructor.

**M**OST of the annual factory meetings have been held and arrangements made for the coming season's work. Owing to the increased cost of dairy supplies it was necessary for cheese factory owners to raise the price for manufacturing cheese. The patrons, realizing the situation, have, in most cases, readily agreed to the increase. Since the first of January the instructors and their annual meetings of cheese factories and creameries. The attendance at most of these meetings was optimistic regarding the future of the dairy industry.

Several factories have recently changed hands. The patrons of at least one factory are evidently not satisfied to chance from cheesemaking to other purposes, with no by-products returned to the farm, and are proceeding to build a new factory.

It is not expected that any shortage of these boxes will develop this season as was the case last year. Substitutes will be on the market to relieve the anticipated scarcity of commercial rennet.

Some herds, especially in certain sections, have been reduced in number, but the cows sacrificed have been chiefly poor producers.

A number of cheese factories and creameries continued operation during the winter months and there is some increase in winter dairying. Greater attention is being given to cow testing and a wider interest taken in supplying a good, uniform quality of milk and cream to the factories. Several additional cheese factories will pay for milk by test this coming season, and this formerly doing so will continue this method of distributing the proceeds. Considerable interest is shown in the problem of grading cream and butter and making some distinction in price in accordance with quality.

The high price of dairy products has lessened consumption somewhat, especially milk in the larger cities.

Feed is high in price, but most excellent hay crops last season, which assists materially in making up for the scarcity of other feed.

Labor on dairy farms and in cheese factories and creameries will be a problem, but on the whole prospects for a good dairy season appear encouraging.

**Dairying in Saskatchewan**  
F. M. Logan, Ass't. Dairy Commissioner, Sask.

**T**HE question then is, "What will its future be?" This province possesses some features which will always be a detriment to the industry. Among these are, our long and severe winters, the lack of succulent grasses during the summer months, the difficulty of obtaining water, especially in the southern part and the ease of making a living by grain growing, especially during a year like the last.

There are favorable features, however, which I think fully offset these. First, the almost unlimited area of fertile soil, which is capable of producing an enormous quantity of feed which can be utilized for winter dairying; second, there is a large percentage of the population who have come from dairying countries and can readily adapt themselves to the dairy business; third, the stability of the business compared with the uncertainty of grain growing, as well as the high prices paid for dairy products during the past few years, and which will in all probability go higher. These will all have a tendency to make dairying one of the most important branches of agriculture.

As to the market for a large output, we need have no fear so long as the quality is right. There will be a good market in British Columbia for some years to come, and when that market is supplied we can turn our attention to England, which is usually in a position to purchase an unlimited quantity. I look forward then to the day when Saskatchewan will produce 50,000,000 pounds of butter each year instead of 5,000,000 pounds, as she is now doing. All that is necessary to bring this about is a willingness on the part of the individual farmers to do their share, and a continuation of the businesslike methods of manufacturing, which have already done so much for the industry. When the output has reached 50,000,000 pounds, there will be no further need for moratoriums or Government aid to poverty-stricken farmers. It is one of the best occupations that men and

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women can be engaged in. We all have a part to perform in this work. The question is, "Will each one do his share?"

Of the two mistakes made in feeding, under-feeding is the most common.

## FARM AND DAIRY

### Dairy Conditions in B.C.

T. A. F. Wiancko, Provincial Dairy Instructor.

**D**URING a large part of the year 1916, the climatic conditions of British Columbia were unfavorable. The severe winter of 1916, fol-

lowed by a late, backward spring and the consequent shortage of dairy feeds were responsible for the cows coming out in rather poor condition. The usual heavy flow of milk during April and May was largely reduced owing to lack of early spring pasture. Wet weather during the haying season in

most of the dairying sections resulted in much damage to the hay crop and the hay being severely felt during the dry production season. The increase largely offset by these conditions and therefore the total dairy production does not show the increase that might have been expected under more favorable climatic conditions.

Prices for dairy products were never higher, and even with higher prices for feeds and a general scarcity of labor, the returns to the milk and cream producers were for the most part quite satisfactory. Given a normal season as to weather and crops for the current year, a substantial increase in total dairy production should be noted.

### New Creameries.

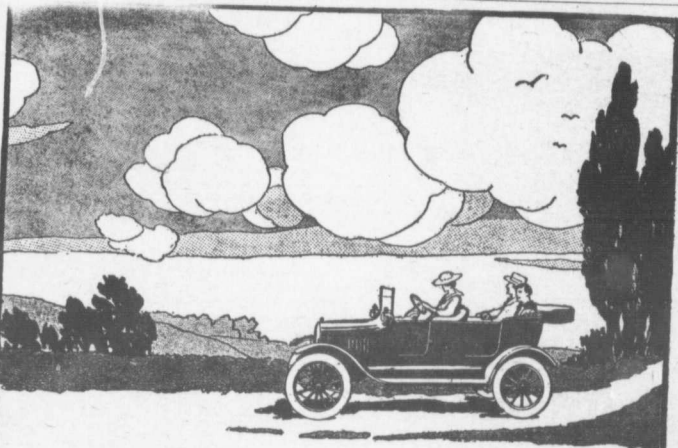
During the year new creameries were established at Cranbrook, Revelstoke and Abbotsford were reopened. The increased demand for condensed and evaporated milk, owing to the war, was followed by the re-opening of the condensers at Ladner and a large quantity of milk that otherwise would have found a market in Vancouver was evaporated for export trade. The condensers in the Chilliwack and Comox districts also show a very satisfactory increase in annual output of evaporated milk.

Our creamerymen are becoming alive to the fact that a system of cream grading, with payments for raw material according to quality, is the shortest cut toward a permanent improvement in the quality of B. C. butter. Already a number of creameries have begun systematic grading and we hope soon to be in a position to report many others falling into line.

### Cow Testing Progressing.

Cow testing associations have received considerable attention and with very gratifying results. Four associations in the coast dairy sections are in a very flourishing condition. At the present time some 2,000 cows are under test. We follow the Danish system; the test supervisor visits the farm of each member once per month. He stays at the farm over night, weighs, samples and tests the milk from each individual cow in the herd and leaves a record with the farmer. This record includes not only the approximate milk and butter fat yield, but also the cost of the food consumed by each cow, the cost of producing 100 lbs. of milk, of 1 lb. of butter fat and the returns from one dollar expended in feed. No system of keeping herd records is so complete and satisfactory as that in which food costs are considered, and for this reason the results obtained in B.C. are particularly valuable. Remarkable improvement has been noted in the sections where cow testing is being carried on, and this is not noticeable amongst the members alone, as many others are profiting by the experience and example of the testing association members. Among the improvements directly due to the work of these associations may be noted briefly the following:

1. The study of the individual cow in each herd, and feeding her according to her milk production.
2. The provision of more and better dairy feeds, with particular attention to succulence and palatability. The number of silos for both winter and summer feeding is increasing at a very satisfactory rate.
3. The selection and rearing of better calves. Marked improvement in this regard is noted after the first couple of years of systematic testing.
4. Early stabling in the fall, better housing and attention to cleanliness, ventilation and comfort.



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Melchor Crives, Marengo, Ga., wrote last February: "I have used your Spavin Cure for never known it to fail." Get Kendall's Spavin Cure at any drug store. Price 50¢ a bottle, 6 bottles for \$3. "A Treatise on the Horse" free at drug stores or from Dr. R. J. Kendall Co., Essburg Falls, Vt., U.S.A.



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**Farm Management**

**Annual Hay Crops**

**W**ill be short of hay next year, as the hot dry weather of last summer killed our clover stands, or annual crops that we might seed in the spring to supplement our hay crop?—A. L. York Co., Ont.

Millet is a crop that is often used for this purpose. The land may be cultivated at frequent intervals up to July 1st, or perhaps a trifle later with the double object of cleaning the land and conserving moisture. Then sow millet at the rate of 30 lbs. of seed to the acre. The crop can then be cut for hay in September. If common millet is the variety sown, and this is the best variety for Ontario, it should be cut after it flowers and before the seed sets. If late millet is sown, it is hard on land, and perhaps it is, in the sense that it is a close feeder.

If your rotation will allow, peas and oats might be seeded early in the season, the seed being mixed in equal quantities by weight and sown at the rate of four measured bushels to the acre. This mixture should be cut for hay just as soon as the seed forms and when the oats are in the milk. Cure it in bunches or coils as much as possible. This crop, too, gives an opportunity to clean the land. As soon as it is harvested the ground can be plowed and surface worked through the fall.

**Crop Diseases Preventable**

**I**n a recent address, the Dominion Minister of Agriculture, Honorable Martin Burrell, stated that last year's epidemic of rust in the Prairie Provinces had cost this country fifty million dollars. That represents \$142 for every farmer in Canada. Other diseases and drought occasioned the country a loss of another fifty million dollars. No specific remedy for rust has yet been discovered. This much is known, that a late maturing crop is more subject to the disease than one that ripens early. It therefore follows that while no variety of grain is immune, the early maturing varieties will have the best chance of escaping. A reasonably early spring, early sowing, and a quick maturing variety of grain constitutes the best insurance against such an outbreak as was experienced last year.

Among other diseases which cause havoc among growing grains, smut is perhaps the most widespread. It is stated that the annual loss due to smut in oats, wheat, and barley amounts, in an ordinary year, to seventeen million dollars, or 6.2 per cent. of the capital invested in those crops. This enormous loss is almost entirely preventable by treating the seed before the sowing in a solution made from one pound of formalin to 35 gallons of water. Prevention of this kind is most necessary in those days of high cost of labor and seed. Wherever there is a danger of smut attacking either of those crops, farmers will do well to take this simple precaution.—Food Production Campaign, Ottawa.

An American visitor to England was discussing agricultural matters with a friend. "Why, in our country," said he boastfully, "the soil is so rich that if you stick a nail into the ground, the next morning it has grown into a crowbar!" "Yes, I know," said the Englishman, "but in this country we use a tack for that purpose!"


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## HORTICULTURE

### Orchard and Garden Notes

Don't plant seed too deep. Watch the ventilating and watering of the hotbed closely these days.

Plum trees do well in the poultry yard and chickens enjoy their shade on hot summer days.

Start a few pots of sweet peas for field planting as soon as the weather permits.

Be sure all cuts made in pruning trees or shrubs are clean, smooth cuts. They will heal easier.

Sow parsley in a box or pot for transplanting outside when the weather permits.

Be sure that you have good strains of lettuce, onions or cabbage if you want the best yields.

Look over plum and cherry trees for signs of black knot or other disease. Remove the disease as soon as possible.

Go over the orchard and lawn trees and take out all dead wood and do other needed pruning.

Bird houses should be made and put up this month. Keep a few near the house. The birds seem to prefer these, since they feel that they are protected.

Nearly all the large cities are paying more attention to vacant lot gardening this year than ever. The wise farmer will also have a good garden this year.

Plan for a fall garden as well as one in early summer. Radishes, lettuce, beets, rutabagas, tomatoes, cabbage, etc. are reliable just as much just before the ground freezes as in early spring. Plan to have them.

### The McIntosh Apple

THE McIntosh apple was originated with John McIntosh, Dundela, Dundas Co., Ont., in 1796, the first tree remaining alive until 1908. The fruit is above medium, roundish, slightly ribbed; skin, pale yellow, almost entirely covered with crimson, dark on sunny side and brighter on rest of fruit; dots few, small, yellow, distinct, but not conspicuous; cavity of medium depth and width; stem short, stout, sometimes medium length and moderately stout; basin narrow, almost smooth, medium depth; calyx partly open; flesh white and yellow, crisp, very tender, melting, juicy, sub-acid, sprightly, with a pleasant aromatic flavor. One of medium size, open quality very good to heavy. Has a strong aroma; season November to February, or later, and earlier in the season in the warmest parts of Canada; tree, hardy, and a strong, moderately upright grower.

### Spring Work on the Lawn

WITH the opening of spring many people find their lawns in poor condition, due to the winter killing and the heaving caused by freezing and thawing throughout the winter months. The trouble may be easily remedied if taken in time. It is necessary that any work done on the lawn should be done very early in order to have the best results, otherwise, the seed is likely to fail to germinate.

During April, the ground, when free from snow, will contain a considerable amount of moisture, and at this time the lawn should be thoroughly raked to remove all the dead grass and refuse from it. The grass seed may then be sown over the bare spaces, or as many people prefer spread a little over the whole area. The seed should then be rolled in.

Doing this work early is essential,

as it assures moisture. Any light snow that we have from April on, will in no way injure the seed.

A good lawn mixture may be purchased, or the seed may be purchased separately and mixed. A good mixture is one part white clover to three parts of Kentucky bluegrass.—J. J. Gardiner.

### An Orchard That Pays

A NEIGHBOR of mine last year sold \$10,000 worth of fruit, chiefly apples, from ten acres of ground. He is a good cultivator. He prunes and sprays according to the well-known rules, that is all. His land is good land, but no better than tens of thousands of acres in Ontario. He took from 60 Northern Spy apple trees an average of \$50 a tree. A friend of mine rented an orchard of Northern Spies, 12 acres, from the farmer who had reared it and became discouraged when the orchard was about 20 years of age because it had not paid. He had not cared for it. My friend pruned and sprayed it, and in the second year of his lease sold \$6,000 of Spies from it, and has taken repeated crops since of equal value.

What finer asset can a father leave his son than a 20-acre orchard planted with fine sorts of apples, of which the Spies only get to their best age at the age of 30 and will produce for generations, conditions being right? Such an asset would be worth more than a very large life insurance policy, and would also be a source of revenue instead of a constant drain all one's life, to be realized upon only by one's heirs, and perhaps then dissipated in some risky venture.—E. D. S.



### POULTRY

#### Leg Weakness in Chicks

BROOD chicks that are closely housed and fed too heavily are very likely to develop weight too fast in proportion to their strength. Unsteadiness in the walk is first visible, followed by frequent resting and sitting, particularly while eating. A change from a forcing ration to a non-forcing ration, as well as a change from a heavy feed to a light one, is essential. The substitution of bran, wheat, and oat meal for corn meal and corn, and the addition of bone-strengthening materials, such as skim milk green feed, and commercial dried bone, remedy the ailment. Outdoor exercise and more room must also be given.

#### Care of Young Turkeys

LACK of vitality and hardiness in the stock is one of the greatest difficulties in successfully handling turkeys. Bronze turkeys are the largest and hardiest of all domestic varieties.

Here are some pointers for turkey raisers: 1. Lice cause great loss in turkeys. Kill them on the hens and keep young turkeys with insect powder, applying once a week when cooped up.

2. Turkeys do best when kept separate from chickens. If the two are kept together the turkeys are likely to take chicken diseases.

3. The growth of turkeys is rapid. Give plenty of nutritious and easily digested food. For the first five days feed four parts of bread crumbs and one part of boiled eggs. Feed one meal a day of rolled oats and give all the sour milk they will drink. Change

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April 5, 1917.

gradually and in three weeks feed six parts of wheat and two parts of corn, with rolled oats once a day. From the time the birds are ten weeks old until maturity give: Wheat, 10 parts; whole oats, 2 parts—increasing to 10 parts in two weeks; cracked corn, 10 parts.

4. Access to fine gravel, crushed shells and broken charcoal is necessary.

5. Give plenty of green food. It prevents digestive troubles.

6. Black or red pepper and ginger in food or drinking water aids in overcoming chills and prevents bowel trouble, especially on cold, damp days. Plenty of grit and oyster shells, together with well-selected, wholesome food, eliminates this necessity in most cases.

7. If young turkeys get wet, take them to a warm room until thoroughly warm and dry.

8. The more exercise the better. Always give free range in dry weather if possible.

9. Dampness, lice and filth are deadly foes to young turkeys.

**Breeds and Breeding**

IN some cases the cause of infertile eggs can be traced to the male bird not getting sufficient food. In his care for the hens and his gallantry to them, he allows them to eat the grain, and if the supply is short, he has to go on short rations. Again, the fault may lie in the size of the breeding pen. There may be too few and there may be too many hens in the pen. If the male is a very active fellow, and he be allowed too few hens, he will harass them, and they so determined to fight off his advances, that the eggs will be poorly fertilized. On the other hand, if the number of hens is too many, and the male not overly active, he will be unable to give them the proper attention. It is necessary to study the condition of the male bird in mating.

It will cost the farmer no more money to raise thoroughbred poultry than it will to grow scraps. The purebreds will not only bring more money in the wholesale market, but it is a fact that poorly graded poultry lose more heavily in shrinkage than do those that are of pure blood. Commission men say that there is a marked improvement in the quality of the poultry that now comes to the city markets, and say that this improvement has been influenced by the buyers who collect poultry from the farmers and ship it to the market. The shippers can pay a higher price for a better quality of poultry and then make more money, for the reason that they get better returns.

More Wyandottes are used for broilers especially on the large poultry farms than any other breed. The Rhode Island Reds make very satisfactory broilers and roasters. The Plymouth Rocks are better adapted for roasting tows than they are for broilers. Leghorns make attractive looking broilers but the combs of the cockerels are rather large for that purpose and the breed is slower in gaining the desired weight. Light Brahma chicks make satisfactory broilers at twelve weeks of age, but after that they lose their plumpness and are too bony to sell well. The feathers on their legs, too, hurts their market appearance.

Get Farm and Dairy every week and think it is a fine farm paper. There is a little of everything in it. I do most of my own sewing and usually use Farm and Dairy patterns. They sure are a perfect fit.—Mrs. Alex. McCormack, Addington Co., Ont.

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Talks With Our Folks

By George A. Gall, Manager of Circulation, Farm and Dairy.

"HE Just killed himself with hard work," said a neighbor in explanation of the sudden death of a young farmer in Eastern Ontario recently. Further discussion revealed the fact that a few years ago this young fellow, with his bride, had moved onto a wornout farm. So

anxious were they to get along that they both worked almost night and day. The young farmer was up and at it before daylight, with seldom an evening's rest or recreation.

At thirty he was an old man, and went to his grave without a realization of his dreams. This young man did not know how to improve his farm by crop rotation or cow testing. He had been too busy with his hands to use his brain to find out such things. He was one of the many who have "no time to read." Many others are repeating his mistake. They work so

hard with their hands they have no energy left to think or plan. They and his family, their brains refuse to work. Consequently, much work is done in the poorest way possible, because done without previous planning. No time is taken to become acquainted with better methods of agriculture.

Every successful merchant reads his trade paper. Every farmer, to achieve success, must also keep well posted. A good farm journal should come to his home, and be read every week. The dairy farmers' trade paper is Farm and Dairy. Any person who

induces a dairy farmer to take and read Farm and Dairy is conferring an incalculable benefit on that farmer and his family. No better reading can be placed before all the members of the farm home. Its honest and sane opinions on better farming, better homes, and cooperation, are well worth the time taken to read them.

The following statement included in a letter from one of our Maritime readers is to the point: "Farm and Dairy is the best paper I ever saw, and I should like to write you a page complimenting you, but will content myself with saying that your ideas on all economic questions seem to me to be just what we need now. Your editorials in regard to the tariff meet the issue fairly and honestly, and if we could only get more of that doctrine preached it would be the salvation of the L. d. The people will find it out one of these days, and I hope then will come the day of 'reckoning.'" —E. P. Whitcomb, Gazetown, N.B.

The department devoted to the United Farmers' Association is one of the important features of Farm and Dairy. The linking up of the different provincial associations into an organization known as the Canadian Council of Agriculture, and the aims and objects of this Council is one of the most important things in Canada today. This is a great forward movement of farmers for farmers, and every progressive man needs to keep well posted on what is doing in this connection. Farm and Dairy has always been an ardent advocate of cooperation among farmers, and ever since the inception of the United Farmers of Ontario some three years ago has given that farmer organization its whole-hearted support.

The women folk are finding the Household Department of Farm and Dairy more and more interesting. The serial story now running is sold in book form at \$1.25 to \$1.50; more than the entire price of a year's subscription to Farm and Dairy. The other features of the Household Department, dealing with discussion of the individual problems of everyday life, farm recreation, tested and economical recipes, the work of women's organizations, etc., are warmly welcomed by the women in the rural homes.

But the biggest feature of this paper is the Dairy Department. The business of dairying will never be neglected in Farm and Dairy. It is the business of the majority of its readers. The other departments, with new ideas, new ways of saving and making money, and the splendid articles of general and special interest, are valuable, but always first and foremost is dairying. Full reports of what is done in the different breeders' associations—Holstein, Ayrshire, Jersey, etc.—are fully recorded in Farm and Dairy.

Our experience has been that the price of the publication does not make much difference, provided we give the reader what he wants. This is the aim of every person in every department of Farm and Dairy. We ask every reader of Farm and Dairy to constitute himself or herself a "win one" club and introduce Farm and Dairy into the lives of others who will be benefited by it.

Cooperation is the watchword of the farmers of Ontario to-day, and why should the dairymen not organize in handling their products after the same manner as the grain growers of the west? Why not store our cheese and butter cooperatively; sell cooperatively and thus bring the producer in Canada and the consumer in Great Britain together and eliminate to a certain extent the greatest factor in the high cost of living—the undue profits of the middlemen?—L. A. Pearson, Thamesford, Ont.



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April 8, 1917.

## Feeding Cows for the Dairy Test

A Successful Competitor's Methods—W. H. Chery Halldam Co., Ont.

**O**WING to the fact that I have had considerable experience in handling cows while in competition at the Guelph and Ottawa Dairy Tests in conjunction with the Winter Fairs at these places, I thought a few suggestions as to the methods of feeding cows while in test would not come amiss.

Before going to the trouble of shipping cows to Guelph or Ottawa, it is well to know that you have a good, heavy producer, and also that she is in good condition, because the competition is generally so keen that conditions need to be as right as possible, or the competitor will be doomed to disappointment. Assuming that the competitor has a good producer, and that she is in splendid condition, it is also necessary that she be a good tester, for how does it avail if she produces 80 or 90 pounds of milk a day if the test is only three per cent.

My method is to feed about 25 or 30 pounds of mangels or blood beets along with all the meal she will clean up of meal, composed of rolled oats, bran, cottonseed meal, three times daily. The meal and roots are fed while she is being milked. Good first-cutting alfalfa, about 10 or 13 pounds at mid-day, and about 10 of ensilage night after night, is relished by most cows. It may not be well to feed hay in larger quantities than those mentioned, else the cows may not take to the grain and roots so readily. This is given merely as a suggestion to would-be competitors at dairy tests, and has been my method of feeding cows which have responded to the treatment and landed the much-coveted red ribbons with their accompanying substantial cash prizes.

In climate, I might just add that if the drinking water should be warmed up to 70 degrees, it will be taken more readily. Plenty of rooming is another essential not to be neglected. Don't over feed. If the cow leaves meal in the manger, take it out. Give her plenty of fresh air, and in milking get all the strippings.

ensilage. It might be advisable to add a little molasses to this pulp. The feeding of your dairy cows in the barn for two or three weeks in May is an excellent plan not only to maintain milk flow, but even more so to give the pastures a good start and thus ensure greater carrying power for the balance of the summer.—E. S. A.

### Feeding a Clyde Stallion

**P**LEASE give me some advice on the care and feeding of a pure bred Clyde stallion for the next few months—Jockey, Ontario Co., Ont.

The overfed, over fat stallion is not only subject to many ailments, but is usually an uncertain breeder. The stallions is due to this cause alone. On the other hand the over worked thin stallion lacks virility and generally produces foal defect both in size and vitality. Every stallion should be well prepared for the breeding season by careful feeding and regular exercise. The best ration for this purpose is composed of clean hay, oats and bran, together with a regular, but limited supply of salt. Many stallion owners find it advisable to crush the oats for this purpose. Also many stallions prefer to eat the hay and sprinking with molasses. The feeding of bran mashes or soaked grain once or twice a week with an addition of saltpetre or blood tonic may be found advisable.

During the heavy breeding season avoid over feeding, but give sufficient stimulating grain food to maintain energy and keep the stallion in good flesh.

Exercise regularly but lightly during this season. When the breeding season is over the stallion should be either put to work on the farm or turned into a good exercising paddock and have his feed reduced proportionately. It is almost superfluous to add that during the next few months particular attention be paid to the teeth and feet.—E. S. A.

### A Dairy Grain Ration

**H**OW should we feed our dairy herd? From now on we will feed a few perhaps 10 lbs. daily. Bran is \$28. 70 to 75 cents a bushel. How can I balance the roots fall, most economically? When by soaking dried beet pulp? I am looking forward to feeding the first two or three weeks in May when the cows are then—H. W. Oxford Co., Ont.

It is extremely difficult to make milk production profitable with meals prices. Such feeds should have been purchased in the summer and fall of 1914 when prices were comparatively reasonable. A grain ration for your bran two parts ground corn, two parts finely ground oats and two parts cotton seed meal fed at the rate of one pound for every four pounds milk produced, should be satisfactory for cows yielding a reasonable flow of milk. If a high grade of distillers' grains can be purchased at a reasonable price I would advise that this feed be used to replace the part of the mixture composed of three parts bran, one part oats, two parts distillers' grains, two parts ground corn and one part cottonseed. Either of these meal mixtures should be fed in conjunction with clover hay as needed, approximately 10 to 12 pounds and oat straw five pounds per day for a 1,000 pound cow. Soaked, dried beet pulp will make a fair substitute for roots or corn

### A Hog Growing Ration

**S**HORTS the local feed store are almost \$42 a ton. We have a large quantity of Western oats, C. W. No. 2, on hand, for which we paid 70 cents. We have been feeding shorts and chopped half and half, for growing pigs. Both seem expensive, but the shorts pigs, so could I economize in the shorts more than the half and half ration by using other feeds on the market more economically than either of these? How many make 100 lbs. of gain on pigs weighing 70 two-thirds, when the slop is mixed with water?—Subscriber, York Co., Ont.

Even with the high price of feeds for swine there still is an excellent opportunity of making fair profit over the cost of feed and labor. Both shorts and finely ground oats are excellent feeds for your pigs. However, both these feeds as well as skim milk contain a high percent of protein and the ration would be considerably improved if a reasonable amount of either corn or barley were used, to supply carbohydrates. If finely ground corn or corn meal can be purchased at \$45 per ton or less, I would advise changing the ration to one of equal parts shorts, finely ground oats, finely ground corn. As the hogs near the finishing stage the corn may be increased from 25 to 50 per cent. In the grain ration unless there is a proportional change the price of the various grains and meals.—E. S. A.

How about that germination test? Oats especially should be put through it this year. With corn it should never be omitted, even when guaranteed seed is purchased.

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The paid subscriptions to Farm and Dairy exceed 22,000. The actual circulation of each issue, including copies of the paper sent to subscribers who are not in arrears, and sample copies, varies from 24,000 to 25,000 copies. No subscriptions are accepted at less than the full subscription rates. Detailed statements of circulation of the paper, showing its distribution by counties and provinces, will be mailed free on request.

## OUR GUARANTEE.

We guarantee that every advertiser in this issue is reliable. We are able to do this because the advertising columns of Farm and Dairy are as carefully edited as the reading columns, and because to protect our readers, we turn away all unscrupulous advertisers. Any advertiser herein dealt dishonestly with you as one of our paid-in-advance subscribers, such transaction occurs within one month from date of its occurrence, and that we find the facts to be as stated. It is a condition of our contract that in writing to advertisers you state: "I saw your advertisement in Farm and Dairy."  
 Rogues shall not ply their 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.

## The Rural Publishing Company, Ltd. PETERBORO AND TORONTO

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

## Will You Want Labor?

THE Ontario Department of Agriculture is going to deal vigorously with the labor situation in rural Ontario. Already they have established a Public Employment Bureau. Through advertisements in farm papers and other mediums of circulation, this Bureau is endeavoring to find just where labor is needed on the farms of the province. Any of Our Folks who are in need of additional help are urged to fill in the blank form as found on the back cover of our issue of last week and mail it to the Department. To secure the help that will be necessary to fill the numerous applications that will be received, every available source will be drawn upon. Experienced farm help will be limited. The Bureau, however, proposes to make itself the clearing house for high school boys, business men on their holidays, and help that may be brought in from the United States. No matter how willing the citizens of our towns and cities might be to help, this will to serve would be of little avail were there not some way of bringing the farmer and the worker together, and the Provincial Employment Bureau seems to be the model instrument for this purpose.

## The Dairy Standards Act

THE Ontario Dairy Standards Act failed of acceptance among the dairymen of the province, partly because of the manner in which it was introduced and partly, too, perhaps, because the time was not yet opportune for its adoption. It was noticeable, however, that at district dairy meetings, where the act was at first bitterly opposed, when the justice of its measures had been explained, it met with the ready acceptance of the meeting. The majority of cheese factory patrons, however, were not at these meetings, and before the act will meet with ready

acceptance these patrons who seldom attend meetings of any kind must be reached in some manner and given a correct understanding of the provisions of the act. How is this to be done?

Elsewhere in this issue, Mr. J. N. Paget, of Haldimand Co., Ont., makes an excellent suggestion. According to Mr. Paget's plan, all cheese factories in the province will be required to purchase sampling outfits, which cost but little, and take samples of each patron's milk for several months during the summer. The dairy instructors in the course of their visits to the factories would test these samples and each patron would then be given a statement showing just how much money he would get were he operating under the Dairy Standards Act. Such a practical demonstration of the working of the Act, were it in force, would do more to remove prejudice and educate the dairy public generally than any number of meetings. It might lead many factories to adopt the test voluntarily that are now following the old pooling method. It would prove to thousands that the principles underlying the Dairy Standards Act are essentially right and just.

## Cost Accounting

COST accounting has played a prominent part in the development of one of the most profitable dairy herds in the province of Quebec, that of Edwards and Alexander at Hillhurst. This herd is well known in the showing ring of eastern Canada, and there are few herds of the same size that can boast of as high an average butter fat production. Fifteen years ago, however, this was an ordinary grade herd of mixed breeding. In the intervening period the herd has been steadily improved with the best sires of Jersey blood, purebred females have been added, the annual profits per cow have been increased from \$17.80 to \$90.10, and the annual production per cow from 200 lbs of butter to 456 lbs.

Good breeding and proper feeding, of course, had much to do with the improvement of this now well known Jersey herd. Of almost equal importance, however, was the system of cost accounting. In the herd ledger there is a separate account kept for every cow, in which she is debited with her feed and credited for milk and fat production. Breeding selections are made on the basis of profits, and all that do not show an annual profit of \$50 a year or over, go to the butcher. Elsewhere in this issue Mr. Alexander, who is now proprietor and manager, tells of the cost accounting system in detail. His letter is worthy of the careful consideration of every dairy farmer who is striving for herd excellence.

## Notes and Views

THE British Government is going to develop British agriculture. Britain is to be made to feed herself. If this effort is successful, and we see no reason why it should not be, where will Canadian farmers dispose of their surplus of dairy products and grain which heretofore have gone largely to Britain? Will Reciprocity then become a vital necessity.

Canadian millionaires with fortunes of mushroom growth are afraid that farmers are making too much out of the war—blood money they call it. Farmers who work from early morning to late night for returns that have not increased in greater proportion than the labor expended are more apt to call the surplus—sweat money.

Combinations that really restrain trade are numerous enough in Canada to make living higher here than in any other country in the world. Our protective tariff is likewise one of the highest in the world. Does the second fact explain the first?

## Standing by the United Farmers

NO question is being more keenly debated in the local organizations of the United Farmers of Ontario than whether or not locals should do all their buying through the United Farmers' Company, or through private concerns or local merchants, when they find that they are able to purchase goods to better advantage by so doing. A considerable percentage of the membership is in favor of all the business of the locals being done with the Central. Others feel that it is unfair to expect their members to pay higher prices for goods that can be purchased to better advantage elsewhere.

The question is an important one. It affects the welfare of the whole movement. Experience has shown that not infrequently, in fact very often, local dealers and even large provincial companies offer locals better prices than the locals can purchase the same goods for through their own company. This is done for the purpose of winning the trade of the farmers away from their Central, and thus injuring and possibly killing the united farmers' movement. It would be folly, therefore, for farmers to let themselves be caught in such a trap again. They have been so caught on too many occasions in the past. On the other hand, it sometimes happens that the local dealers or other business concerns are so situated that they are able to give better service and better prices to locals than the Central Company can furnish. It would hardly seem right under such circumstances to ask the locals to penalize themselves in order to support the Central.

The following is probably the best solution of the difficulty. Whenever a local finds that it can purchase goods to better advantage in some other quarter than it can through the provincial farmers' company it should, whenever possible, send the order direct to the provincial company and ask them to make the purchase for them. In nine cases out of ten such action would show clearly whether or not the lower price was offered with the object of injuring the movement. If it was a competing firm it would hesitate and probably refuse to recognize the order when sent through the Central Company. A refusal on their part would reveal their real object in making the low offer to the local. If, however, they filled the order, the Central would naturally expect to be able to purchase additional goods at the same prices, or approximately the same prices, for other clubs. This would enable the Central to improve its purchasing connections and, thereby, to assist other locals. Action of this kind would be of great assistance in developing the work of the Provincial Farmers' Company.

Another method has been suggested by an officer of a farmers' club in Wellington county. His proposal is that when a club finds that it can make \$25 or so more by ordering a car of corn or oats from some business concern other than the farmers' company, it should use this extra profit to purchase extra shares of stock in the provincial company. This is an excellent suggestion. If these low prices were offered with the object of injuring the provincial company the action of the local in using the profit to strengthen the Central Company would ensure the defeat of the purpose and result in the action of the competing firms building up the Central Company in stead of weakening it.

Whether or not clubs adopt either of these suggested methods it will confer a real service on the Central organization if they will always advise where than they can purchase goods cheaper elsewhere than they can through it, and at the same time given the Central the prices they have been quoted, and also the names of the firms who have made the quotations. This would keep the Central Company constantly informed as to what its competitors were doing and enable it to meet their competition to better advantage.

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**In Union There is Strength**

**More Locals Formed**

THE deep interest the farmers of Ontario are taking in the United Farmers' movement and their willingness to support it is shown by the readiness of farmers in ready response to meetings have not only been held, to organize when ever addressed by speakers representing the U.F.O. On Monday of last week President R. H. Halbert, of the townships, in Peel county, in the afternoon, and at Stewart Town, in Halton county, in the evening. At both points five branches of the U.F.O. were formed. Huttonville local starts off with a membership of 48, and Stewart Town with a membership of 37. Both locals purchased a share of stock in the United Farmers' Company. The same evening Secretary J. J. Morrison and Mr. L. H. Blatchford, of the United Farmers' Company, addressed a meeting at Wexwith 21 members. Similar meetings are being held at numerous points and with practically similar results everywhere.

One interesting feature of the meetings that are held is the readiness with which the farmers who attend the meetings contribute towards the expenses of the speakers. At several meetings addressed by President Halbert during his recent trip in Essex and Kent counties collections were taken towards defraying his expenses, with the result that enough money was raised in this way to pay his entire expenses for the trip. This, naturally, is a big help to the provincial organization, and makes it possible to send out more speakers, and therefore to organize more locals. Such action is all the more appreciated because the U.F.O. does not receive any government grant, and thus is free from government control of any kind. It is the farmers' own organization.

**Legislative Matters and the U.F.O.**

At a meeting of the executive committee of the United Farmers of Ontario held in Toronto, March 27, a number of important matters relating to legislation now before the Ontario Legislature, with which the interests of the farmers of the province are closely identified, were considered. It was thought well that a committee should wait on Premier Hearst himself in reference to the Government's bill relating to cooperative societies, which had had its second reading and was about ready for its third reading. A deputation, therefore, waited on Premier Hearst and were much pleased with the reception they received. They found Premier Hearst reasonable in his attitude, pleased to obtain their views and apparently willing to make any reasonable amendments to the bill. He stated that the bill had not

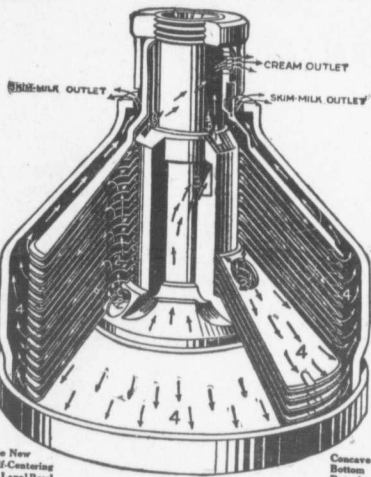
been drafted by himself but by officials of the Department of Agriculture and it was introduced by the Government on their recommendation. He did not promise that the bill would be withdrawn at this session but stated that he would see that the views of the deputation were carefully considered in the bill.

Should the Government decide to proceed with the passing of the bill at this session of the Legislature it may become necessary for the United Farmers, through their locals in all parts of the Province, to interview their local members and urge that the bill be held over for at least one session. While the Government has amended the bill so that it will not apply to the United Farmers' Cooperative Company, Limited, this amendment is not entirely satisfactory, inasmuch as it will apply to all new companies that will be organized hereafter. If the farmers of Ontario follow the example of the farmers in western Canada it is altogether likely that a considerable number of subsidiary committees of the United Farmers' Company will be formed. For instance, the United Farmers' Company may decide within another year or two to undertake the selling of live stock on a large scale. This may make it desirable to form a subsidiary company for this purpose, the stock in which company, of course, would be controlled by the United Farmers' Company. It may become necessary before long also to open up stores in Montreal, Toronto, and other leading cities. For this purpose another subsidiary company may need to be formed. All these subsidiary companies would not under the objectionable features of the proposed new Act. For this reason the bill itself has been eliminated from the Act does not overcome the objectionable clause of the bill which requires that all future companies organized shall submit their statements to the Government, be restricted as to how their surplus funds should be expended and be controlled in other similar ways.

After the deputation had waited on the Government and the new resolution was passed and sent to Premier Hearst:

"Whereas we realize the need for comprehensive legislation providing for cooperative societies and appreciate the good intentions of the Provincial Government in proposing the present bill, and whereas we object very emphatically to certain clauses in the bill as now drafted, which object very emphatically to certain clauses in the bill as now drafted, which objections have been fully explained to the Department of Agriculture:

"Be it therefore resolved that we, (Continued on page 27.)



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TRUE education always must have the thought of God in it.

## Winning the Wilderness

(Continued from last week.)

**Synopsis of Preceding Chapters.**  
On his return from the Civil War, Asher Aydelot, the hero of the story, refuses to settle down on his father's farm and announces his intention of marrying Virginia Thaine, a southern girl and daughter of a bitter enemy of the Aydelots. His father disinherits him, but he marries Virginia and together they trek westward to the Kansas plains, where Asher and his cousin, Jim Shirley, have won success from the land. Many hardships are encountered.

Jim Shirley becomes dangerously ill and Virginia is the only person to go to Carey's Crossing for the plain's doctor, but Dr. Carey comes to her rescue. He is surprised to learn that she is Virginia Thaine, whom he knew and loved in the South. The prairie yielded but slowly to its possessors, and after they had paid out-time, energy, hope and undying faith in its possibilities, a wrathful sun and a rainless sky wrought havoc to the hopped pastures of 1871. Barley Choppers, the real estate hawk, tries to get the settlers to sell their claims to him, but without avail.

On the night of a great winter blizzard the life of one of the Aydelot boys and for days Virginia lies at the point of death. Dr. Carey and Bo Peep, his colored servant, come to the rescue. Three years later, little Thaine is born and is the joy of his father and mother, and Mrs. Aydelot claims that Thaine's, for he was born there.

Jim Shirley receives a letter from Alice Shirley, the wife of his brother Tank, who is a useless fellow, asking him to be guardian of her little girl Leleh, who since her mother's death has been with a friend, who proves to be Miss Jane Aydelot, into whose hands the Aydelot property fell when Asher was disinherited. Dr. Carey volunteers to go to Cloverdale for Leleh. Her coming to Grass River marks an epoch in the annals of the settlement, and she soon becomes the friend of everyone and a great companion for Thaine.

"I am hoping to have only thoroughbreds some day. That's a good horse you ride," Jacobs replied.

"Yes, he has a strain of Kentucky blue-blood. My wife owned a thoroughbred when we came West. We keep the decent still. We've never been without a big horse in the stable since that time. Do we turn here?"

They were following the lower trail by the willows, when Jacobs turned abruptly to a rough roadway leading up a shadowy hollow.

"Yes. It's an ugly climb, but much shorter to the sheep range and the cattle are near."

"How much land have you here, Jacobs?" Asher asked.

"From Little Wolf to the corporation line of Wykertown. Five hundred acres, more or less, all fenced, too," Jacobs added. "This creek divides Wyker's ground from mine. All the rest is measured by links and chains. We agreed to metres and bounds for this because it averages the same, anyhow and I'd like a stream between Wyker and myself in addition to a barbed wire fence. It gives more space, at least."

They had followed the rough way

only a short distance when Asher, who was nearest the creek, halted. The bank was steep and several feet above the water.

"Does anybody else keep sheep around here?" he inquired.

"Not here," John Jacobs answered. "Look over there, isn't that a sheep?"

Asher pointed to a carcass lying out of the water on a pile of drift where the stream was narrow, but too deep for fording.

"Maybe some dog killed it and the carcass got into the creek. My sheep can't get to the water because my pasture is fenced. That's on Wyker's side, anyhow. I won't risk fording it get over there. It's as dead risk now as it will ever be," Jacobs asserted.

Their trail grew narrower and more secluded, winding up a steep hill between high banks. Half way up, where the road made a sharp turn, a break in the side next to the creek opened a rough way down to the water. As they passed this, a woman coming down the hill caught sight of the two horsemen around the bend



"It's a friendly act on somebody's part," he said, grimly.

and made a swift movement toward this opening in the bank, as if to clamber down from their slight. She was not quick enough, however, and when she found she had been seen men had passed on.

Asher, who was next to her, looked keenly at her as he bade her good morning, but John Jacobs merely lifted his hat without giving her more than a glance.

The woman stared at both, but made no response to their greetings. She was plainly dressed, with a black scarf tied over her low-colored hair. She had a short club in one hand and a big battered tin can in the other, which she seemed anxious to conceal. When the men had passed, she looked after them with an ugly expression of malice in her little pale gray eyes.

"That's a bad face," Asher said, when they were out of her hearing. "I wonder why she tried to hide that old salt's eye."

"How do you know it was a salt cat?" Jacobs asked.

"Because it is exactly like a salt cat I saw at Pryor Gaiques' old cabin, and because some salt fell out as she tipped it over," Asher replied.

"You have an eye for details," Jacobs returned. "That was Gretchenried his bartender, and is raising a family of little bartenders back in the hilly country there, while Jimpe helps Hans run a perfectly respectable tavern in town."

"Well, I may misjudge her, but if I had any interest near here, I should want her to keep on her own side of the creek," Asher declared.

And somehow both remembered the dead sheep down in the deep pool at the foot of the hill.

The live sheep were crowding along the creek on the side of the big range when the two men entered it.

"What ails the flock?" Asher asked, as they saw it following the fence line eagerly.

"Let's ride across and meet them," Jacobs suggested.

The creek side was rough with many little dips and draws, and the boundary line in places. The men rode quietly toward the flock by the shortest way, as they faced a hollow deepening to a draw toward the creek. Asher suddenly halted.

"Look at that!" he cried, pointing toward the fence.

John Jacobs looked and saw where the ground was lowest that the barbed wires had been dragged out of place, or more sheep to crowd through at a time. As they neared this point, Asher said:

"It's a pretty clear case, Jacobs. See that line of salt running up the bare ground, and here is an opening. The flock is coming down on that line. They will have a chance to drink after taking their salt."

John Jacobs slid from his horse, and giving the rein to Asher, he climbed through the hole in the fence and hastily examined the ground beyond it.

"It's a friendly act on somebody's part," he said grimly. "The creek cuts a deep ale under the bank here. There's a pile of salt right at the edge. Somebody has sprinkled a line of it clear over the hill to toll the flock out where they will scramble for it and tumble over into that deep water. All they need to do is to swim down to the next shallow place and wade out. The pool may be full of them now, waiting their turn to go. Sheep are polite in deep water; they never rush ahead."

"They swim well, too, especially if they happen to fall into the water just before shoring time when their wool is long," Asher said ironically.

"What did you say Gretchen Gimpe had in that tin can?" Jacobs inquired blandly.

"Oil of sassafras, I think," Asher responded, as he tied the horse and helped to mend the weakened fence. "Nobody prospers long after such tricks. I'll not spend the day over lost sheep," John Jacobs declared. "Let's hunt up the cattle and forget this, and the woman and the scary little twist in the creek trail."

"Why scary?" Asher asked. "Are you so afraid of women? No wonder you are a bachelor."

Jacobs did not smile as he said: "Once when I was a child I read a story of a man being killed at just time I go up that crooked, lonesome hill road. I remember the picture in the book. It always makes me think of that story."

When the fence was made secure the two rode away to look after the cattle. And if a Shadow rode beside them, it was mercifully unseen, and in nowise dimming to the clear light of the spring day.

It was high noon when they reached Wykertown, where Hans Wyker still fed the travelling public, although the flourishing hotel where Virginia Aydelot first met John Jacobs had disappeared. The eating-place behind the general store room was divided into two parts, a blind partition wall cutting off a narrow section across the farther end. Ordinary diners went through the store into the dining room and were supplied from the long kitchen running parallel with this room.

There were some guests, however, who entered the farther room by a rear door and were likewise supplied from the kitchen on the side. But as there was no opening between the two rooms, many who ate at Wyker's never knew of the narrow room beyond their own eating-place and of the two entrances into the kitchen covering the side of each room. Of course the prime reason for such an arrangement lay in Wyker's willingness to evade the law and supply customers with contraband drinks. But the infraction of one law is a breach in the wall through which many lawless elements.

(Continued on page 26.)

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### The Upward Look

#### An Easter Thought

FORGETTING those things which are behind and reaching forth into those things which are before, I press towards the mark. Phil. 3:13-14.

I was much impressed by what an old gardener told me yesterday. In the corner of his garden was an old covered well, which had not been used for many years. One day he looked into it, when to his surprise he saw what looked like hay. But when this was brought to the surface and examined, it proved to be the roots of an old Lombardy poplar tree, which, though some distance away, had struggled and forced their way to the richer, moister ground.

This reminds us of the miracle of fresh creating that is taking place in this glorious spring. Everywhere growth is pushing on and upward to better conditions, light and sunshine. If this law for bettering of conditions is so strong and so general in the natural world, how much more so should it be in the spiritual?

No one should be satisfied unless he feels that he possesses the best and the highest in life in matters spiritual, of all that God holds for him, which is his for the simple taking and holding. Just as naturally as those roots down there in earth's darkness reached for what to them was the best, so naturally should we, in no matter what conditions of hardship and discouragement, claim as ours the best of brave patience and courage-trust. Particularly at this Easter time when we think of Christ's triumph over the powers of death, must we take His power and strength for our own.—I.H.N.

#### How I Grow My Begonias

Elizabeth Beaman, Durham Co., Ont.

ABOUT the 1st of April I place the bulbs (rough end up) in pans of dried moss, put them in a sunny window and keep them moist.

In two or three weeks, or when the roots begin to show through the loam, I pot them in rich loam. This loam I make by taking equal parts of leaf mould and chip earth, mixed well together and sifted thoroughly, adding a small quantity of sand. If they are large, use a five-inch pot. If they are small I use a seven inch one.

After the plants are potted I keep them in the same sunny window until the 24th of May. Then I put them on the verandah, where they remain until the cold weather comes.

When the begonias begin to die down, I water them less frequently, and by the last of October, or the first part of November, they are ready to be taken out of the pots, placed in pans of dry earth or sand, and stored away in a warm closet. Our verandah faces the south, but while the plants get plenty of light and heat they are practically never exposed to the direct rays of the sun.

I have at present large plants, ranging in color from the darkest crimson to the palest pink, also yellow and white ones. I grow both double and single varieties, and some flowers from the double ones measure from seven to eight inches across. I like this kind of begonia very much, for while it gives me no trouble during winter, it will bloom continuously from the first of June until the end of September, usually reaching perfection by the middle of July.

Begin with a good bulb (planting it right side up), place in a partly shaded window or verandah, use ordinary common sense about soil and water, and I can promise you a plant well looking at.

## "It Might Have Been"

That is the disappointed cry of many a woman when she realizes that her bread or pastry with which she has taken such pains has been a failure. "It would have been all right, had I only used the right flour," she says. "It would be safe—to be sure that your baking will be just what you wish it to be, than to be sorry afterward and have vain regrets. Get the correct flour to begin with. You have it in



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The flour that is daily gaining favor, and that never loses a user. If you have never used Reindeer, just try a bag, and experience the joy of creating a perfect product. Once you have seen a Reindeer loaf, you will never want any other. For rich, flaky pastry, our "DELIGHT" brand is unsurpassed. Order a bag to-night. Your grocer keeps it.

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FARM AND DAIRY

April 15, 1917.

The Message of Easter

By Orison Sweet Marden.  
O H, the glory of the returning Spring, answering the recurring call of the great Sun god! Standing in the midst of God's great laboratory, after the awakening breath of Spring has swept through it, dull indeed must be the soul that is not moved by the wonder, the miracle, the beauty of it all. Cold and dead thrilled in response to the great diapason of Nature, when, in the awakening year,  
"The woods were filled so full with song  
There seemed no room for sense of wrong."

Spring is the angel that rolls away the stone from the tomb in which all life has been sleeping in the grip of death. It is the call to the buried plant, to burst their grave clothes, to cast off the Winter death shroud, and come forth to new life, to blossom forth into new beauty.

"How fitting it is that Easter, the great festival of the resurrection, should be celebrated in Spring! There is a marvel of significance for all humanity in Easter Day. It reminds us that death is not the end, that life has triumphed over death. The rebirth of Nature, the struggling toward the light, the strenuous effort for self-expression of the myriads of seeds which have been buried in the earth for months, is symbol of our ascending life.

As Spring awakens the seeds of new promise, new hopes, new expectations, new joys, new growth, new beauty in Nature, so Easter comes to us with the joyful message of a new and fuller life.

Spring!

C. W. Jakes, Grenville Co., Ont.  
COME away to the meadows, frolic and sing!  
Cold winter's fetters are broken and torn;  
Hark to the sounds that awaken and ring.

At noon-tide, and even, and flush of the morn!  
Telling of Spring! Telling of Spring!

Skies of soft azure, of blue opalescence  
Crossed by wee cloudlets, balmy and white;  
Cloudlets of leisure of soft adolescence

That linger and flutter and pass out of sight,  
Telling of Spring! Telling of Spring!

Balmy and sweet are the warm winds that hover  
Breathing of uplands now fast growing green;  
Whispering the story from forest and cover,

Of wakening flow'rets, and gay, gurgling streams.  
Telling of Spring! Telling of Spring!

From thicket and hedges, from tree-tops spread o'er us,  
Sings the bold robin, so happy and free;

Bursting with songs of joy, triumphantly glorious!  
Trilling and warbling in rollicking glee!  
Telling of Spring! Telling of Spring!

Skies of soft azure, breezes that whisper,  
The singing of birds, and the murmur of streams;  
These are the heralds of Winter's fair Sister!

Awakening old Nature from long, dreamy dreams,  
Telling of Spring! Telling of Spring!

So, come away to the meadows, frolic and sing!  
Cold winter's fetters are broken and torn;

Hark to the sounds that awaken and ring,  
At noon-tide, and even, and flush of the morn!

Telling of Spring! Telling of Spring!

HOME CLUB

When Dreams "Come" True

FOR a long time it has been my desire to have a shirtwaist box for my bedroom. Even though I have a good-sized clothes closet and my room, I have felt the need of such a box and just recently my dreams came true.

One reason why I have not had this box sooner has been that in looking around I had never come across one which I considered the right size. Finally I made a trip to our garret. "Whenever you are absolutely stuck for something you need, go to the garret," is not my motto, but it seems to work very well at times. My findings in the garret proved to be even better than a box. I located an old-fashioned trunk about four feet long and 18 inches deep with a flat top, and I decided it would fill the bill nicely.

Cretonne makes the best kind of covering for a bedroom box and I secured some which harmonized with the wall paper and side curtains. When putting on the cretonne a little fullness is necessary around the sides and ends of the box or trunk, so I bought enough material to be even twice around the three sides and this allowed for the necessary fullness. I then plaited the material, but not very full, plaiting and tacking with brass-headed tacks as I went along. Padding the top is not necessary, but I padded mine a little and also tacked a heavy piece of cotton over it before putting on the cover, to prevent wear. The top piece was also tacked on with brass-headed tacks.

Some people line the inside of their boxes with the same material as the outside, but I have been told that it is rather difficult to do it neatly. Others paint the inside white. I took new sheets of brown paper and lined mine, first sprinkling in a little lavender, and it looks very well indeed. Last of all I purchased a brass handle, so that the top is easily raised and lowered.

Taking everything into consideration, I am quite proud of my new shirtwaist box—so proud, in fact, that I wanted to tell Home Club members all about it—"Sister Mac."

Celery may be blanched (whitened) by leaving dirt up around the stalks or by placing boards along the rows. Sometimes drain tiles are set over each plant to advantage. There are also several kinds of patent paper or wood bleachers.

RESERVE POWER

THE McLaughlin valve-in-head motor actually develops from 15% to 20% more power with the same fuel consumption than any other type of motor of the same bore and stroke. This fact has been established by engineers, by block tests and tests in actual service. This means fuel economy and power.

Because this power is sometimes vital, it is found in abundance in McLaughlin Motor Cars, ready for instant application. It is "RESERVE POWER" and marks the dependable and efficient car.

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A Glimpse of City Life

R. M. McKee, Household Editor.  
**R**ECENTLY, new apartments were erected adjoining the offices of Farm and Dairy, and naturally we were rather interested in watching their progress and completion. Several times we "peeked" in the door to watch developments and finally were allowed to go in and look around.

One of the main features in connection with apartments is the conservation of space. If we who are accustomed to the large farm houses were suddenly transplanted to a small suite of rooms, it would take us some time to get accustomed to what we would consider "cramped quarters." Are there not times, however, when we wish that our farm houses were not quite so large and thus eliminate a great deal of hard work which is necessary in order to keep things neat. The apartments which adjoin our offices are not an exception to the rule by any means in regard to the conserving of space and yet they are quite home-like in appearance.

The first thing to attract one's attention upon entering these apartments is the built-in buffet. When we saw it, we stepped across the hall to our offices, got a camera and took the picture shown herewith. Since we snapped it, leaded glass has been put in the doors of the top cupboard and the china does not show quite so plainly, but the effect is good. As will be noted, there is quite a deep shelf or table below the top cupboard on which fancy tableware can be attractively arranged. In the illustration a cut glass set, a cocoa



"The first thing to attract one's attention upon entering these apartments is the built-in buffet."

one of the nicest pieces of furniture he had seen for some time. It is finished, of course, to match the other woodwork in the room.

In case some of Our Folks may be interested in seeing the floor plan of these apartments, we have drawn a rough plan which will give an idea at least of how they are laid out. No window is shown in the dining room, but it is lighted by a skylight and is very cheerful. The other rooms are quite light also.

21 Points on Butter Making

Mrs. Alex. McArthur, Simcoe Co., Ont.

1. In the care and use of milk, the first great essential is cleanliness.
- (2) If a separator is used, it must be thoroughly cleaned after each time of using.
- (3) If shallow pans are used, they must be kept where the air is pure and free from dust.
- (4) Separator cream must be cooled before being added to the cold cream already collected.
- (5) No cream should be added within 12 hours in summer and 24 hours in winter before churning, because all the butter fat cannot be extracted from cream that is not fully ripened.

every time fresh cream is added to that in the crock or can.

(7) In ripening cream for churning, let us develop a mild acid flavor rather than one too sour. The public taste demands the mild flavor.

(8) If using a starter to assist in the ripening, use only well-flavored buttermilk, or fresh skim milk heated to 70 degrees and kept warm till sour. When enough cream is gathered for a churning, warm to 70 degrees and add starter.

(9) Avoid the use of too much butter color. A pale June color is preferable to a too highly colored butter.

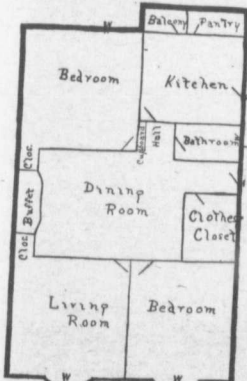
(10) Buttermilk should never be left standing in churn. The wood becomes soaked with milk and absorbs bad odors and flavors.

(11) The churn should be thoroughly scalded, and in summer cooled with water, before putting in the cream.

(12) Cream should be strained through a fine perforated tin strainer before churning, that any bits of curds may be removed.

(13) The temperature at which cream should be churned varies according to circumstances, the average being from 60 to 64 degrees. This should bring the butter in nice firm granules in from 20 to 30 minutes.

(14) Drain buttermilk off butter and



Plan of a Modern City Home.

set and several other pieces of delicate china are tastefully placed. Beneath are four drawers and more cupboard space. The contractor who built the apartments told us the other day that he considered that buffet

Made in Canada  
**Tarvia**  
 Preserves Roads  
 Prevents Dust-

Good Going  
 The Whole Year Round

You can travel comfortably and swiftly on this road with a light buggy, a heavy wagon or an automobile, regardless of the state of the weather. The firm, durable surface is free from dust or mud.

Incidentally, it is low in maintenance expense and tax money is released for other purposes or for new roads in other localities.

This road is built with Tarvia as a binder. Tarvia is a dense, tough, coal-tar preparation of great bonding power, cementing the stone together in a tough, plastic matrix.

Automobile traffic cannot tear the stone loose, but merely rolls it down and makes it smoother and firmer. The surface sheds water like a duck's back. Frost does not get into the road at all, and after a long, hard winter

the road is just as good when the snow melts as in the fall.

It is expensive folly nowadays to build roads in Canada which are not frost-proof and automobile-proof.

The Tarvia adds nothing to the ultimate cost. It makes the road a little more expensive to construct but very much cheaper to maintain, with the result of a net saving in the end.

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 Seed Merchants Established 1850 HAMILTON, ONT.

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**The Canada Paint Co., Limited,**  
580 William Street, Montreal.  
"Sunspas" is the best varnish for outside use.

wash it twice in the churn, using enough warm water should be used to take the chill off.

(15) Use the best quality of salt—less salt the taste of your customers. About three-quarters of an ounce to the pound is the usual quantity.

(16) Work well so that salt is thoroughly mixed through the butter. If not thoroughly worked, it will be mottered with the butter. If to pack, work twice with some hours between workings.

(17) For printing, pack butter in a compact mass, smooth on top. Be sure and have print well soiled and cooled. Press down till filled. Level off with ladle. The square-cornered print is preferred.

(18) The best white parchment paper should be used for wrapping. Dip wrapper in cold water, lay print on it straight, fold carefully about the block of butter.

(19) After the butter is made, it is important to store it in a clean, cool place where there are no bad odors for it to absorb.

(20) Milk should never be kept in living rooms if set in pans or crocks. Neither should it be kept in cellars where vegetables are stored.

(21) The best way to set warm cream for churning is to set the crock in hot water and stir till of the right temperature.

**COOK'S CORNER**

**Use Lemons More Liberally**

WHILE lemons are no doubt used in many homes, still they are considered by the majority of people as a luxury rather than a necessity. But according to medical authority the lemon should hold a prominent place in our daily menu on account of its health-giving properties. A professional nurse once told me that 29 limes were cured by lemons, so in that case we should all partake of this tropical fruit which by means of exportation and importation has been placed within easy reach of all, at a comparatively low price to the consumer.

We know that a glass of hot lemonade (unsweetened) will often break up a severe cold; the juice of a lemon in a little water will sometimes cure a sick headache. What a delicious, refreshing drink is lemonade, especially during warm weather. Space will not permit me to enumerate the many uses of the lemon; but below are a few recipes in which it is used:

**Lemon Jelly.**  
One ounce gelatine, one-half pint cold water, one-half cupful sugar, juice of one large lemon, with a little more cold water. Soak gelatine in water, dissolve by placing bowl in boiling water on stove. When dissolved add other ingredients. Stir well and pour into mould.

**Lemon Icing.**  
One egg yolk, one cup sugar, one lemon (grated rind and juice). Mix all ingredients thoroughly and put in double hot water. Cook 15 to 20 minutes. Let cool and spread between cakes.

**Lemon Sauce.**  
One lemon, one cup sugar, four tablespoons water, four teaspoons corn starch, one tablespoon butter. Boil sugar, then add corn starch and butter, lastly the lemon, also grated rind. Serve at once. Vinegar is sometimes added to season.

**Lemon Biscuits.**  
One-half pound butter, three eggs, two cups white sugar, one pint sweet milk, five cents worth baking ammonia (pulverized), five cents worth oil of lemon, six cups of flour. Cream

**Fistula and Piles Evil**

Any person, however embarrassed, can readily cure these afflictions with FLEMING'S **FISTULA AND PILE CURE**—without a doctor, and simply by sending 1 box of this medicine if it does not cure more cases within thirty days, the money is refunded. All particulars given in the enclosed leaflet.

**Write now a few lines**—Fleming's page, enclosing these two enclosed, and the enclosed, to:

**Fleming Bros. Chemists,**  
63 Church Street, Toronto, Ont.

**CLOVER SEED**

- Red Clover No. 1 ..... \$14.00 (extra fine)
  - Red Clover No. 2 ..... 13.00
  - Alsike No. 1 ..... 13.50
  - Alsike No. 2 ..... 12.50
  - Timothy No. 2 ..... 4.00 (No. 1 for purity)
  - Alfalfa No. 1 ..... 13.00 (Northern Grown)
  - Silvermine Oats for Seed 1.10
  - Cotton bags, 30c. Freight paid on lots of \$25.00 and over.
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**SEED CORN**

A particularly fine lot of hand selected seed on the cob, Long-fellow, White Cap, Leaming and Bailey.

Write for prices delivered.  
**J. S. WAUGH, Chatham, Ont.**

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ALL KINDS No. 1 Seed Corn. Try our Improved Leaming, Reid's Yellow Dent, and Blue Bird.

**CHEESEMAKER WANTED** for South Branch Dairy Co., small factory, by William McCausley, Hamilton.

**WANTED**—To hear from owner of farm or unimproved land for sale. O. O. Minn.

**WANTED**—Two men; one with one or two years' experience in Creamery or Cheese Factory, and other no experience. Belleville Creamery, Limited, Belleville, Ont.

**WANTED**—Single man for grain farm, good horseman, four hundred dollars and Norton, Lanfear, 2 1/2 a.

**WHITE PLYMOUTH ROCK EGGS**, \$2.00 per setting. Rose Comb Reds and Guelph bred-to-lay Barred Rocks, \$1.00 per setting. Arthur Elliott, Oshawa, Ont.

**BUFF ORPINGTON EGGS** for hatching, \$1.00 for 16 eggs. 2 chicks guaranteed. Silver cup winners and extra. Ont.

**WHITE LEGHORN EGGS**—\$1.50 for 16. Fine Barren cockered heads, 10c. Australian and American layers. J. R. Hand, Lindsay, Ont.



the butter and sugar, add the eggs well beaten. Stir the ammonia several times in the flour, then add to mixture. If no stiff enough, add more flour, as they should be quite stiff, and mix with the hands. Add the oil of lemon last. Cut in oblong shape about one-quarter inch thick, and bake in rather hot oven. Will keep a long time.

One more hint: A little lemon juice thrown into boiling rice will whiten it and separate the grains.

**Good Vegetable Garden Possible**

Mrs. W. McCrae, Essex Co., Ont.

THESE should be a good vegetable garden on every farm. I imagine I hear some busy farmer's wife express herself somewhat after this fashion: "It's easy enough in theory, but not so easy to put into practice. I would like nothing better than to have a real good garden every summer, but father is always too busy to give it the attention necessary, and I never seem to have any time to spend on it either, so how can we have a good garden?"

That argument is quite logical too, I believe. Of course it is always the busiest people who accomplish most and the ones who can usually find time to squeeze in one more task to the already full day's schedule. I don't think, however, that working hard in the vegetable garden is just the thing for a woman, unless she has plenty of time and enjoys the work. Being out in the fresh air is good for one, but if we have a flower garden to look after, we can employ our time most profitably working among the flowers.

But what about the vegetable garden? Why not hand it over into the charge of that boy or boys of yours who are now old enough to take a certain amount of responsibility around the farm? Special inducements might be offered for an especially good garden, for a collection of vegetables, or for the best specimen or certain quantity of some particular vegetable. There is nothing that stirs the interest of the boy quite so much as the knowledge that he will realize something for his efforts. Some arrangement might be made whereby mother would buy all her vegetables from the young gardener, at a price lower than that asked by the market gardener, of course, but one that would make it worth while for the boy to have a nice little sum laid by at the end of the season. It seems to me that a plan carried out somewhat after the fashion I have outlined should prove successful, and we should not only have better gardens, but more important still, the boys will feel they have an interest in the farm business.

**Responsibility, Good for Our Girls**

Mrs. David Caughell, Haldimand Co., Ont.

IT is a great opportunity we mothers have to be teachers of our children. Yet it is hard to realize that the growing girl of 12 is old enough to bake bread, cookies, or turn a pancake, all of which have a little knack of their own. Suggestions as to how these things should be done make the tasks much easier for the girls than by learning through experience. How much easier it is for everyone in the home if the girls can keep the household running for a few days in case of sickness or while mother makes a visit.

It has been said that a lazy mother makes smart children. Perhaps in one way this is not so far from the truth, for in the homes where the mother does fancy work and the girls the housework, they grow up to be quite handy, and the mother is more

loved if she does not slave away all day by herself. There are usually plenty of "extras" for mother to do in the home. Here is the experience of one mother about whom I read, and which impressed me very much.

The mother had a daughter 16 years old and going to school, and she was getting into the habit of thinking of nothing but waiting on herself. Her mother realized that her daughter was growing selfish, and she went to a friend for advice. This friend advised she should be responsible, so the mother decided to try it. She asked the girl to sweep the dining-room and clear the table in the morning, to help her brothers with their lessons, and to help on Saturdays and holidays. This mother said she thought she was the greatest sufferer during those days when she placed so many burdens upon her daughter's young shoulders, but the result showed that the daughter became more considerate and unselfish.



**ALWAYS READY FOR AN EMERGENCY**

"Is that you, Bob? Well I'm phoning from Bill Parker's place. I got as far as Clover Hill when I developed engine trouble. She doesn't spark properly. I wish you would go to that big box in the far corner of the Garage, pick out a couple of those Plugs marked "Jumbo Molite" and fetch them to me on your Bike. You'll have to hustle because I've only half an hour to get this Milk on the 5.15 train."

That's the way it goes. Just little time saving incidents like this in the every day life of the 130,000 progressive Canadian Farmers who have Telephones, is what is helping to keep the Business of Agriculture at the top of the Nation's Industries.

To the woman on the Farm, the Telephone has proved the greatest boon. It keeps her in touch with her neighbors and the various social activities of her community. It banishes loneliness and creates contentment.

But its greatest value comes in a case of emergency—when time is the greatest factor and the doctor or vet is wanted. The Telephone will reach them quicker than any other known method and it only takes one such incident to make it pay for itself several times over.

"How the Telephone Helps the Farmer" is a Book you should read if you have no Telephone. A Copy will gladly be mailed you without cost or obligation. Clip the Coupon and mail to-day.

WE SUPPLY everything a Telephone Company needs from the original station of a Company to the complete plant—bells, apparatus and batteries as well as line construction material and tools. Our business is the telephone business.

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GILSON MFG. CO., LIMITED, 257 York St., Guelph, Ont.

**DEAL WITH Farm & Dairy's Advertisers**



Elgin County Grange Annual Meeting

ELGIN County Division Grange held its annual meeting in St. Thomas on March 24th, with a large attendance of delegates and members from the three splendid Granges of the county. The worthy master, Mr. Wm. Pranglin, of Forest Rose Grange, occupied the chair and managed the business capably and expeditiously, giving ample time for the talks and discussion which followed.

Reports of the annual meetings of the Dominion Grange, The United Farmers of Ontario, United Farmers' Cooperative Co., and Kincardine Salt Co., were given by A. McCallum, H. Palmor, Miss Robinson and W. E. Wardell. The veteran Granger, Mr. Frank Hunt, addressed the meeting on the value of cooperation, which led to a discussion introduced by the new secretary of the Dominion Grange, N. E. Burton, of Port Stanley.

It was decided to hold a county picnic in the summer. The secretaries of all granges with a committee, were named to make all necessary arrangements. District Representative W. Buchanan gave a very interesting and instructive address on town and country gardens, seed selection and poultry, and also answered questions on these subjects. A discussion took place on having a grange contest of gardens, which will be brought before the subordinate granges for action.

A resolution was passed unanimously and enthusiastically, which read thus: "As the grange from its inception has always given the same equal rights as to the men, and as a grange cannot be considered a perfect one without her presence, it being the first organization to make this decree, be it resolved that this county grange place on record its appreciation of the bill lately passed by the Legislature in giving women the franchise."

The election of officers resulted as follows: Past master, W. Pranglin; master, W. E. Wardell, Middlemarch; overseer, A. McCallum, Glasworth; sec-treas, Miss Robinson, St. Thomas; lecturer, W. E. Leeson, Aylmer; chaplain, Charles Saywell, Town Line; steward, Frank Hunt; ass't steward, Neil Burton, Port Stanley; stewardess, Mrs. McIven, Apple Grove Grange; gatekeeper, C. F. Wester; Ceres, Mrs. J. D. Pound, Dufferin; Pomona, Miss Clara Humphries; Flora, Miss Lena Hill, Forest Rosa.

Legislative Matters and the U.F.O.

(Continued from Page 19.)

the executive officers of the United Farmers of Ontario and of the United Farmers' Cooperative Company, Limited, urgently request the Government to amend the bill in accordance with our suggestions or lay it over till next session. In case it is laid over we will gladly cooperate with the Government to draft a bill which will meet with general approval."

Good Roads Legislation.

A discussion was also held on the proposal of the provincial Government to construct provincial highways. It was felt that the subject was such a large one that it needed to be given more careful consideration by the farmers of the province as a whole than it has yet been accorded. This would necessitate its enactment being somewhat delayed. The following resolution was therefore passed: "Whereas the provincial Government has drafted a bill with regard to provincial highways, and whereas we are of the opinion that it would be highly injudicious and unwise at this juncture to proceed with large

outlays of public money for a purpose that would benefit a comparatively few people;

"And whereas this matter has not been discussed or considered to any extent by the people of the province in general;

"Be it resolved that this meeting of representatives of the United Farmers of Ontario desire to place on record their emphatic disapproval of the whole project and would call upon the people to place their seal of disapproval upon it in every manner possible."

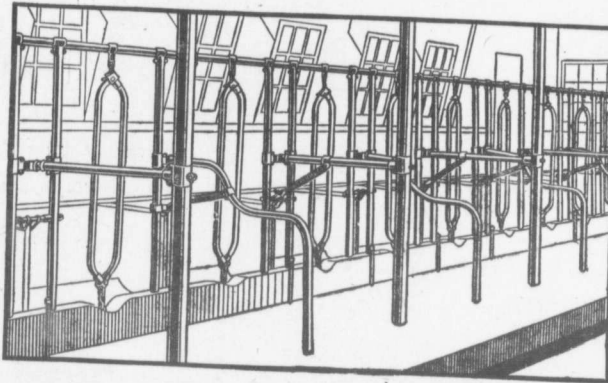
Clubs which have an opportunity of speaking to their members in the provincial Legislature on these matters should do so immediately, as the House is likely to adjourn very soon.

Crop Failure in Argentina

REMARKABLE story of the failure of the crops in Argentina and the threatened proximity of famine and misery is told in a de-

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## Sanitary Steel Stable Equipment



What it means to you

MODERN, Sanitary Stables, at a reasonable outlay of time and money.

Convenience in looking after your cows, and a saving of time and labour in tending, feeding and cleaning them.

Increased milk production, no waste feed, and increased profits.

What it means to your Cows

COMFORT, cleanliness, and almost as much freedom as when in pasture.

More sunlight and fresh air, the great germ destroyers.

Our catalogue is FREE. Write for it to-day. It tells all about the complete LOUDEN line.

## LOUDEN MACHINERY CO. OF CANADA, Ltd.

Dept. 123

GUELPH, Ont.

"Everything for the Barn"

spatch to the Dominion Department of Trade and Commerce from its representative at Valparaiso, Chile. He says:

The crops which had succeeded in surviving the terrible drought have been cleaned up by an invading army of locusts, the like of which was never known. La Epoca reports that rapid and energetic intervention of the Argentine Government is imperative in order to avoid general disaster.

From Buenos Aires, Entre Rios, Santa Fe, Cordoba and San Luis comes the alarming news of thousands of homes threatened with misery.

To the north of the Province of Buenos Aires agriculturists have been the victims of the drought, the plague of locusts and a host of minor scourges which follow in their train.

South of Santa Fe, after the almost total loss of the wheat and flax, the disaster has been crowned with the total loss of the maize. Dead stocks, such as implements, furniture and plant, are being sold to provide

necessaries for the coming winter. But no one will buy horses because of the inability to provide food. Owing to the custom of paying farm rents on the basis of a percentage on crops the landowners are also in a general vortex. A veritable panic is raging in Rio Cuarto, where the starving cattle cannot be sold at any price.

The Fourth Canadian International Good Roads Congress will hold its sessions in the Horticultural Building, Lansdowne Park, Ottawa, April 19-24. A very complete display of road materials and road building machinery will be on exhibition and every phase of the highways problem will be discussed by Canadian and United States engineers.

Beans, potatoes—here are the two crops that yield most largely of human nutriment per acre and therefore the crops that we should regard with favor this year. The latter crop grows anywhere in Ontario.—C. James.

# FARM AND DAIRY

April 5, 1917.

**THE FARMERS SEEDSMAN**  
**SEEDS** FIFTY-ONE YEARS SERVICE  
 1866 1917

The demand for all kinds of seeds will be greater than the supply this year. The safest plan is to **SEND US YOUR ORDER NOW** and guard against the possibility of being disappointed. We pay railway freight on all orders of \$25.00 or more in Ontario and Quebec.

Rack Crib cured in crates, bags.	10	No. 2 Red Clover	Bus
Golden Glow	\$2.18	No. 1 Alsike	\$14.90 to \$15.00
White Cap	3.15	No. 2 or 3 (No. 1 for purity)	\$11.90 to \$12.00
Longfellow	3.15	Sweet Clover, White Blossom	\$20 and 25c per lb.
N. Dakota	3.25	No. 1 Timothy	\$13 to \$15.00
Compton's	3.25	No. 2 (No. 1 for purity)	3.90
Quebec No. 25	3.25	Alfalfa—Minnesota Grown (No. 1)	3.90
Rack cured, in bags, at 1c per bush, less than in crates.		Ont. Variegated No. 2 (almost No. 1)	\$25.00 to \$25.00
O.A.C. No. 3 Oats	2.00	Lyman's Grimm	\$25.00
O.A.C. No. 22 Oats	\$1.25 to 1.35	North-West	\$25.00
Yellow Russian Oats	1.90	Orchard Grass	\$25.00
Potatoes, Irish, Cobham	4.50	O.A.C. No. 21 Barley	\$13 to 14.85
Bureka	4.50	O.A.C. No. 21 registered	2.35
Delaware	4.00	Marquis Spring Wheat	2.40
White Intermediate	4.00	George Wheat	2.50
Thousand Headed Kale, 250 lb.	60c lb.	Early Britain Peas	2.00
Gov't. Standard No. 1 Red Clover	\$14.90 to \$14.50	Hairy Vetch	\$11c lb.
MANAGER: Keith's Pripotaker		Another Sugar Cane	7c lb.
Levithan, Yellow Intermediate, Danish, Sludstrup, Yellow moth Long Red, in lb. pks., 25c; if 5 lbs. or more of one variety, 22c.		For Clover and Timothy at low 50c for each cotton bag required. Grain sacks free.	

We are buyers of Alfalfa, Red Clover, Sweet Clover, Timothy and Seed Grain. Send samples. We are especially in need of Rape. Send for our 1917 Catalogue. It is FREE.

**GEORGE KEITH & SONS SEEDS**  
 124 KING ST. E. TORONTO

**MAKE YOUR BIKE A MOTORCYCLE**  
 Add a special cost by using our Attachable Motor. Write today for our FREE BOOK describing the SHAW Motor and second hand cycles, all makes, new and second hand. SHAW MANUFACTURING CO. Dept. 136, Galesburg, Kansas, U.S.

FOR SALE—100 Cedar Dale R. C. Leghorns. Will furnish you, on short notice, eggs at \$1.50 for 15, or \$5.00 per hundred. Satisfaction guaranteed. A. J. Tamblin, Orso, Ont.

**ADVERTISE** in these popular columns and so profitable—costs you only \$1.45 an inch.

**THE NATURAL FOOD FOR LIVESTOCK**  
**MAKE MORE MONEY**  
 There is nothing a farmer can turn into money so quickly as a balanced food ration for livestock. British feeders send 4,000 miles to procure Linsed Oil Cake and feed it to all their stock—sheep, hogs, and cattle. Oil Cake Meal should be mixed regularly with all other foods, on account of its high percentage of protein. A mixture of straw and Oil Cake Meal will contain the same nourishment as good hay, and at half the cost.

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 TORONTO & MONTREAL

**Start Now**  
**Feed Your CATTLE & LIVE STOCK**  
**LINSIED OIL CAKE**  
 PURE LINSIED OIL CAKE MEAL

Write to-day for our free booklet "Facts to Feeders."

## The Milking Machine—An Experience Meeting

(Continued from page 3.)

In a few cases for instance, we have thought it would pay better to buy a found one of the teats, due to slight injury, cow pox, etc., that did not milk as freely as the others, so that when these were finished this particular teat would only be half milked. If this milk were overlooked, a very probable case of sargent would result. I would just like to emphasize the point that speed is not to be had by machine milking. The average milker will make a satisfactory saving in time and labor over good hand milking and at the same time it can be arranged to have separating done while engine is running milk. But this subject an entirely new article on I just wonder if it wouldn't pay well to spend 20 or 30 minutes longer in many cases and thereby increase the efficiency of the machine.

**A Double Unit Enough**  
 Geo. S. Wallbridge, Prince Edward Co., Ont.

**F**ARM and Dairy has asked me for my experience with the milking machine. I have always appreciated the manner in which Farm and Dairy has endeavored to help the farmer and it is in the same spirit and for the same reason that I will tell of my experience with the milking machine. I visited other farmers who had milking machines and saw them in operation. Finally we made our own with a single unit machine. We have a two unit machine with a single pail, which is all that one man can look after. We use gas engine, one and one-half horse power chine holds 50 lbs. We have one set of test cups that fit any cow's teats. We find that our two units are very busy as he wants to be changed to another, like the milker and he brushes the udder ahead of the milker. The agents will want to sell two pairs, of course, and the farmer will naturally think he will one and found that enough. The installing, a handy man can put in a milker himself in track times.

**Pleased for Two Reasons**  
 Donald Brown, Prince Edward Co., Ont.

**T**HE mechanical milker has proved to be a successful purchase for me. I have used it for two seasons and have not had a cow lose common sense and uses his cows as shrunken quarters. I certainly could not say this with the average hand milking which I was getting. Three or four of the largest dairymen in this locality have inspected my herd and the machine and after considering the situation, have bought machines of their own.

I will cost about \$400 to instal one double unit, that is for two cows, and for milking four cows, \$135 extra. This price includes a first class two and one-half horse power gasoline or coal oil engine. It has not cost over \$10 in the two years for repairs. It is most important to change at once any leaky rubbers. The machine must be air tight to give satisfaction. I am milking 25 cows with the machine and have two double units and expect to put on another double unit and milk all my cows that way. A person should have from 15 to 20 cows, or the more the better, but with the average herd of from 10 to 12 cows and the present situation in regard to help taken into consideration, we have not had any bad effects on also the price of all dairy products, I our cows.

Any milking machine will fail in the hands of many farmers. Any farmer, however, who will use a little good common sense and use his cows as he would like to be used himself, will save himself a lot of hard work by having a milker. If he had only one man to have a milker if he had only 10 cows. Of course it depends a lot on the man's circumstances; whether he has lots of help to milk and a few cows, how much land to work, etc. If you have a milker, the more cows the better. You don't mind the milking and the gas engine can be used for other work. New repairs do amount to much gasoline or high cow, but it does not take much, running about an hour night and morning.

## Semi-Annual Meeting

The Semi-Annual meeting of the **TORONTO MILK AND CREAM PRODUCERS' ASSOCIATION**, for deciding prices for the summer season, will be held in **FORESTERS' HALL**, 22 College Street, Toronto, on **SATURDAY, 7th APRIL, 1917**, at 1 o'clock p.m.

eting

buy a little rate a can and by the ma- cut 40 with the d not e a sider pping

ward for ring pre- and the and of ma- in ne- no at- ce er- a- ot- is it- s- l- d-

April 5, 1917.

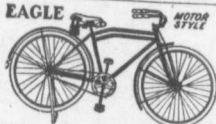
### Don't Cut Out A SHOE BOIL, CAPPED HOCK OR BURSTITIS



**FOR ABSORBINE**  
TRADE MARK REG. U.S. PAT. OFF.

will remove them and leave no blemishes. Reduces any puff or swelling. Does not blister or remove the hair, and horse can be worked. \$2 a bottle delivered. Book 68 free.

**ABSORBINE, JR.**, the antiseptic ointment for man and horse. For Boils, Brucis, Old Sores, Swellings, Venereal Venes, Venerealities, Ailurs Pains. Price \$1 and \$2 a bottle in quantities or delivered. Will tell more if you write to **J. F. WING, P.O. Box 152, Kingston, Ont.** Montreal Can. Absorbine and Absorbine, Jr. are made in Canada.



**EAGLE MOTOR CYCLE**

Write to-day for our big **FREE CATALOGUE** showing our full line of Bicycles for Men and Women, Boys and Girls—Tires, Coaster Brakes, Wheels, Inner Tubes, Lamps, Bells, Cyclometers, Saddles, Equipment and Parts for Bicycles. You can buy your supplies from us at wholesale prices.

**T. W. BOYD & SON,**  
27 Notre Dame Street West, Montreal.

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Book "Patent Protection" Free  
**BABCOCK & SONS**  
Formerly Patent Office Examiner. Estab. 1877  
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**EGGS FOR HATCHING**  
Famous White Wyandotte eggs for hatching from prize winning stock. Utility strains, \$1.50 per setting.  
**B. W. BALL, R. R. 2, Jarvis, Ont.**

**CHEESEMAKER WANTED**  
Prospects 50 tons. Apply  
**A. J. Campbell, Komoka, Ont.**

### GREAT DISCOVERY!

Remarkable Cloth that won't wear out or tear! Samples free by post to any reader.

Just fancy, readers! Whether a blacksmith, carpenter, cooper, labourer, farmer or clerk, could you by solid hard grinding wear, your day in the week—not just Sundays—wear a small hole in six months? Or a pair of Pants or a \$6.50 Suit in six months? Could any of your boys wear a small hole in a \$2.75 Suit in six months? Grinding wear and tear—months of solid days—but every weekday and Sunday tool if any reader can do this, he can get another garment free of charge! A remarkable new untearable cloth has been discovered by a well-known firm in London, England. These new Holeproof clothes are amazing! You can't tear them, you can't wear them out, no matter they are exactly as finest tweeds and serge sold at \$70. But the price is only \$1.25 for a pair of Trousers, Breaches or Gent's Suit, delivered free by post, with no further charge whatever, \$6.50 only. Boys' Suits from \$2.75. Knitwear from \$1.50. Readers are reminded that the above charges, and there is nothing more to be paid on delivery. Full particulars of these remarkable clothes, together with a large simple measure chart, with which readers can measure themselves at home, will be sent absolutely free and no post paid to all those who just send a postcard to Ladies Dept., Free and No Post Paid, Clothing Co., P.O. Box 104, Toronto, Ontario. London address is 56, Abchurch Lane, London, W.C. 4. But all applications for samples should be sent to Toronto, Ont.

(Adv.)

## FARM AND DAIRY

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### The Makers' Corner

Butter and Cheese Makers are invited to send contributions to this department, to ask questions on matters relating to cheese making, and to suggest subjects for discussion.

### Continue Educational Work

**J. N. Paget, Halimdam, Ont.**

**SINCE** the Dairy Standards Act of last year, it is my opinion that the government should require that each cheese factory throughout the province that continues to follow the pooling system this year, should secure a sufficient number of sample bottles to receive for a month. During the months of say, June, August and October, samples could be taken from each patron's milk and at the end of each of these months the instructors who visit the factories would test said samples and leave with the factory secretary the result of the test. Then the owner or secretary of each factory should make a comparative statement for each patron, showing what he had received under the pooling system and what he would have received if he had been paid for the butter fat content or by test.

I feel that unless some such work as this is carried out in the factories this season, a year from now, the views which now prevail will not have changed. The government may do all the educational work possible at the dairy schools but it will fail to impress the individual patrons of our factories, unless the products from their own herds are used in making the demonstration. I believe, too, that the most important work that the instructors are called upon to do at nine-tenths of our cheese factories, is to help the patrons to take better care of their milk. The pooling system certainly is not helping in bringing about this important condition.

### Problems of the Creamery Man

**Wm. Newman, Victoria Co., Ont.**

**T**HERE are a few, some of them time only will solve, yet problems are the best things we have, without them we would be poor men indeed.

The problem of the past was to interest the man who cared for horses, stock and grain crops, in profitable dairying; to even get him to understand that dairying was not beneath his dignity; that men in other places milked cows, and he would not become obstinate by giving attention to dairying; to interest him in skim milk or hand fed calves; that a separator was worthy of his investment; and that the creamery was the one most and best better on the market at the highest price for himself. These creamery men wrestled with these problems. Time and education have placed all these in the past. Now no man feels that he is at women's work when he is milking cows. Calves hand fed, separators, and the creamery, with all their by-products, are one united whole.

In 1903, when Eldon creamery first came into existence, there were only five creameries in Eastern Ontario. The problem was to get the local trade, even the Toronto market, to use creamery butter in preference to dairy. As late as 1905 such price firms as The Wm. Davies, Limited, handled more dairy butter than they did creamery. All this is changed.

**Present Day Problems.**  
Present problems are now, but just as real and worse as problems of the



## FARMERS!

Those who sent in their orders for Cement before March 29th, may consider themselves fortunate, as the price is now advised that the Railways are liable to advance their freight charge accordingly.

Coal Oil and Gasoline have advanced two cents per gallon and Sugar forty cents per hundredweight during the past two weeks.

Owing to the enormous demand for seed corn this season, we have completely exhausted our supply.

Farmers having seed corn or potatoes for sale may forward samples to this office stating variety, price and quality. We expect to have our Coal prices ready in about one week or ten days and are still soliciting estimates. Up to the present our coal estimates have amounted to nearly two hundred cars.

We are still in position to offer a few carloads of good Western potatoes at an attractive price. We have been advised to drop that potatoes have reached their lowest level.

Our Produce Department is progressing very favorably. Get our prices before selling elsewhere. Always send us a statement of what you are shipping.

## The United Farmers' Co-Operative Co. LIMITED

110 Church Street Toronto, Ont.

### The Bissell Disk takes hold of any soil, and has the "knack" of doing great work.

The Disk Plates are of special design—they cut and turn the soil over. The draught is lighter, too, than any other Disk. In fact, you won't find another Harrow that can begin to compare with the record of the Bissell. Write Dept. R. for free catalogue.

**T. E. BISSELL COMPANY, LTD., ELORA, ONT.**



## Roof Barns with Paroid

**THE** choice for roofing narrows down to wooden shingles, metal, and Paroid. The fire risk with wood is too great, and frequent repairs are necessary to insure even reasonably long life. It costs less to lay Paroid than either metal or wood, affords full protection from the weather, checks a fire from falling sparks and embers, and requires no repairs. Roof with

## NEPONSET Paroid ROOFING

Three permanent colors—Grey, Red and Green. Every roll carries a complete kit inside and our unconditional guarantee. Paroid has given 10 years' service. Go to a Paroid dealer and get real satisfaction.

**NEPONSET Paroid ROOFING**  
The largest manufacturers of Roofing, Wall Boards and Roofing Felt in Canada.  
For Homes: Neponset Two Siding.



LOOK FOR THE ROLL WITH THE PAROID LABEL

# CHEESE BOXES for the 1917 Season

We make the STANDARD BOX as demanded by  
Railway Commission.

Factories at  
Ingersoll,  
Cavanville,  
Peterboro,  
Belleville,  
Ont.

Take no chances with any other.

Write us for prices delivered to your  
station.

**C. B. JAMES & CO., Limited**  
ORILLIA, ONT.

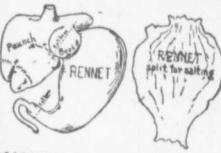
**He's had  
GARDINER'S  
CALF MEAL  
ever since he was weaned**

"I've never seen anything like it to take the place of new milk and keep calves going right ahead. I feed it first with scoured milk, then with calves grow older, and finally with water only as Gardiner's Calf Meal is superior to all other calf meals ever in better condition and faster growth. Gardiner's Calf Meal is guaranteed to contain 19% to 20% Protein and 8.5% to 9% Fat. This excess fat increases with young calves, lambs and pigs as well as with calves.  
Buy it in 25, 50 or 100 lb. Bags. If your dealer hasn't it, write us for prices on it and also on Gardiner's Seco-Milk, Pig Meal, Ostrum and Ontario Feeders' Cotton Seed Meal.  
GARDINER BROS., Feed Specialists, SARNIA, Ont."



## CHEESEMAKERS! HANSEN WANTS RENNETS

We have opened a factory in Toronto for the manufacture of our well-known Rennet Extract and other preparations. And we need all the Rennets we can get. You will find it profitable to collect Rennets from the farmers and ship them in your locality and ship them to us. The Rennets should be those of milk-fed calves only.



**GOOD PRICES PAID.**  
Write us for special circular containing full instructions for the preparation of Rennets for shipment, and particulars of the prices we will pay. Do this now—There's money in it for you.

**CHR. HANSEN'S CANADIAN  
LABORATORY,**  
201 Church St., Toronto, Ont.



**Try before you Buy**  
on 30 days' free trial, and he will be glad to do so. If you are not entirely satisfied with it at the end of that time, it will be his to keep. A better separator for less money. We consider the Viking seed fat keeps only when you are dissatisfied.

Describe the booklet free. Despatch.  
**SWEDISH SEPARATOR CO., 515 South Fifth Ave., Chicago, Ill.**

**VIKING CREAM SEPARATORS  
OF QUALITY (7)**

## SHIP YOUR BUTTER & EGGS

—to us. We are not commission merchants. We pay net prices and remit promptly.

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

## CREAM

WE ARE OPEN TO BUY  
CREAM,  
both for churning and table  
use.

ASK ANY SHIPPER  
about our service and prompt  
returns.

ASK FOR PRICES.  
The figures for yesterday  
may be TOO LOW for to-  
morrow.

WE FURNISH CANS.

**The Toronto Creamery Co.,  
Limited**  
Church St., TORONTO, Ont.

**It Will Pay You to men-  
tion Farm and Dairy when  
writing Advertisers.**

past. Progress has been rapid. Machinery we used five years ago is now scrapped or soon will be. Pasteurizers have changed, many times in 10 years. The problem is how to keep abreast of the times and make ends meet.

The country or local creamery, in the past found it difficult to change the farmer from farm butter making to the creamery. Now it's to keep him from going to the city creamery. It has even been guessed that soon there would be no local creameries, that all cream would be sent to the large centers.

Yet we modest fellows on the cross roads, having invested all and more, can't pull up. We will hold with the hope of, well I think the third concession will stay with us this year. So we work on. The country is served, and out of it all I hope that the dairyman on the local and large center will come forth stronger because each has played his part fair and well.

The problem of good help has become expensive. Yet I must say that as far as I am concerned I have nothing but praise for the men who work after day, doing their best in these times of many calls, and high cost of all things, for only a wage. My help have cooperated, and high help and helped solve the problem of finishing up a job, which called for extra effort and care. God bless the men who sell their skill and labor.

### The Grading Problem.

Grading cream, that is one effort which will save this country from low markets, is a problem. Not too big if handled well, easily operated if only there are leaders, who will see that creameries cooperate.

Grading butter is no longer a problem. The Department of Agriculture has solved that by just grading butter for the creameries. I believe it will be a great success if the same department of agriculture would be a clause in the Dairy Standards Act, which refers to creameries and cream grading. All creameries and cream and there would be no friction between dairyman and creamery men. Then the province going at it. There was never a voice raised against this part of the Act. Yet it has been clauses relating to cheese. Why? Other problems are ice or coldness roads, express rates and service. Cold storage at the creameries, parchment was put out of business, boxes, color, and coal. I'll stop.

My spirit needs a rest, after looking at the difficulties of life work. After a while I will write you of the "Joys of the creamery man." I believe they are as many as the problems.

Chr. Hansen's Laboratory, the well-known manufacturers of Rennet Extract, Cheese and Butter Colors and similar preparations have opened up a Canadian Factory at 201 Church St., Toronto. They will manufacture their various lines for the Canadian trade only. It is understood that they will pay an attractive price for milk-fed calves' rennets. All farmers and calves' rennets are urged to touch with Chr. Hansen's Canadian Laboratory concerning prices. By doing this maintaining the high standard of Canadian Cheese. Send them your address and they will forward an illustrated circular containing full instructions for the preparation of the rennets for shipment.

"Is your wife economical?"  
"Very. Look at the clothes that she makes me wear!"

THE  
*Premier*  
SILO



NEW FEATURE FOR 1917  
Catalans Model on Request, Dept. "D"  
**THE PREMIER CREAM SEPARATOR CO.**  
TORONTO, ONTARIO

All cows give some

## MILK

Well fed cows of course give  
**MORE MILK**

but cows fed COTTON SEED  
MEAL give the

## MOST MILK

and do it at less cost per pound.  
**COTTON SEED MEAL**

When carefully selected, such as our Brands are, is the most economical and most satisfactory concentrate on the market. It is rich in protein, and offers it to the animal in a highly palatable and digestible form, and cows need protein to produce the maximum amount of milk. A scientific dairyman will always include in the ration sufficient cotton seed meal. More natural farm roughage and less grain products can be used. Ask your Experiment Station.

**OUR BRANDS:**  
Owl Brand 41-46% Protein  
Dove Brand 36-38% Protein  
28 1/2-30% Protein Meal 20-25% Pro.

All selected quality—Cotton seed meal is our specialty and has been for forty years.

Come to headquarters.  
**F. W. BRODE & CO.**  
Memphis, Tenn.

Established 1875 Incorporated 1915

## FOR SALE

A very high-class Belgian Stallion, coming 7 years; Color, Strawberry Roan. Weight between 1,900 and 2,000 lbs. Son of the Sweepstakes Draft Mare—Chicago Horse Show, 1907. Come and see his colts. Address—

**W. C. HOUCK**  
R. R. 1, Chippawa, Ont.

April 5, 1917.

FARM AND DAIRY

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The Late "Dan" Drummond of Ottawa

A Sketch of His Life and an Appreciation of the Man by His Friend and Associate, T. G. Raynor

THIS passing of Daniel Drummond on Thursday, 22nd of March, is a distinct loss to the agriculture of Canada. For some 17 years or more he has been before the public, serving in various capacities, and his work among the live stock interests is well known.

Mr. Drummond's ancestors came from Perthshire, Scotland, in 1832, when his grandfather settled first at Long Point, Que. Four years later he founded the Drummond homestead at Pettit Cove, now a part of Montreal. His father, Daniel Drummond, was a successful farmer, and founded one of the first pure-bred Ayrshire farms in Canada in the year 1868. Mr. Drummond, Jr., who was then eleven years old, grew up with his favorite breed of cattle, a herd of which he later organized on a neighboring farm to his father's, and when the World's Fair was held at Chicago Mr. Drummond, Jr. a herd of Ayrshires was one to be selected to represent Canada at the exhibition. The number of first prizes which came to this herd, and among them was Nellie Osborne, which won the sweepstakes as being the best Ayrshire cow, any age, on the grounds.

At this time Mr. Drummond was considered one of the best filters of show cattle in the Dominion, as well as one of the best judges of the Ayrshire breed. Later he was considered the best authority on this breed in Canada.

Both Mr. Drummond, senior and the junior, were excellent plowmen, and the latter won many prizes at plowing matches. This has made his services much sought after as a judge in recent years at a number of the plowing matches held in Ontario and Quebec. In 1899 Mr. Drummond sold out his interests at Pettit Cove to manage Mr. F. W. Hodson's farm at Brooklin, Ont. At his dispersion sale of pure-bred Ayrshires these cattle made a new record in prices, a daughter of Nellie Osborne selling for \$415.

While on the Hodson Farm Mr. Drummond was asked to tell others how he did things, and here he became so successful that his services were in demand from coast to coast. Few men have had a wider experience in Farmers' Institute work. Being able to speak French made him very useful in organizing the work in his native province.

About eleven years ago the Live Stock Branch organized the Record of Performance Department for pure-bred dairy cows, and Mr. Drummond was given charge of the work. To this work, for which he had every qualification, he applied his energy and ability, until to-day the department has an outside staff of some 16 men, who superintend the milking and testing of cows for qualification in the advanced Registry.

During the typhoid epidemic some four years ago in Ottawa Mr. Drummond took that dread disease and never fully recovered from its effects. On Wednesday, March 14th, he was taken suddenly ill, and went as the emergency case to the hospital, where he lived just a week after his operation. His heart failed to carry him through the severe shock to his system at his age of 60 years. He leaves a widow, a daughter in the civil service, three brothers and three sons to mourn his loss. The large number of floral tributes at the funeral on the 24th ult. from various live stock associations and friends spoke of the high esteem in which he was held. He was a member of Knox

Presbyterian Church, on the Temperal Board, and enjoyed the confidence of his fellow members. His place on the bowling green will be greatly missed, as he was a true sport, and could lose a game in the same spirit that he could win one. The men of Mr. Drummond's type are all too few, and his many friends and admirers all over Canada will regret his demise.

Marketing Ontario's Wool

THE Ontario Sheep Breeders' Association, through their secretary, Mr. R. W. Wade, Parliament Buildings, Toronto, has issued a notice to the wool producers of Ontario regarding the proposed government grading of wool at the central station at Guelph. The association will make a charge of five cents per fleece to cover actual expenses involved in handling the wool. The clerical work, printing, postage, stationery, etc., being paid for by the Ontario Department of Agriculture. This charge is reasonable and is lower than the charges prevailing in all other provinces that have been selling wool cooperatively.

The Department is sending wool sacks and twine to the district representatives in order that all men making application to this office or to the district representatives, will be able to secure twine for the tying of their fleeces and also have the privilege of the loan of just wool sacks for the shipping of their wool. In the case of a county where there is no district representative, twine and sacks will be sent direct from Toronto. Wherever possible shippers are urged to combine in order that the wool can be shipped by car lots, all shipments to be prepared and consigned to R. W. Wade, Winter Fair Siding, Guelph, Ont.

Legislative Doings Affecting the Farmers

Loans for Ontario Farmers

THE long-expected act respecting loans for agricultural purposes has at last made its appearance in the Ontario House. It is somewhat on the plan of the tile drainage act; that is, the farmer who desires a loan applies to his municipal council, and the council then makes application to the provincial treasurer. The council that desires to avail itself of the provisions of this act must first pass the bylaws prescribed, and the loan is made on the security of the debentures of the township. Some of the more important provisions of the act are as follows:

Every such loan shall be for the erection of buildings and machinery, fencing, draining, clearing and other permanent improvements approved by the regulations, or for such other purposes having for their object the increase of the productive powers of any such loan shall be for one-third operation. The debentures shall be payable in equal annual installments of principal and interest during the currency thereof, in other words, according to the amortization plan. Every loan shall constitute a first lien upon the land, and no loan shall be made to any applicant where the lands are mortgaged or otherwise encumbered without the consent in



FIVE modern oil refineries, so located in five Canadian provinces as to eliminate long railroad hauls, aid directly in reducing to you the cost of the highest grade oils for the lubrication of the different machines on your farm.

All our oils are supplied in steel barrels and steel half-barrels — convenient, economical. No waste. You use every drop you pay for.

AN OIL FOR EVERY FARM MACHINE

	For Gasoline Engines, Tractor, Auto or Stationary <b>POLARINE OIL</b> STANDARD GAS ENGINE OIL
	For Kerosene Engines, Tractor or Stationary <b>POLARINE OIL HEAVY</b> IMPERIAL KEROSENE TRACTOR OIL <small>(Recommended by International Harvester Co.)</small>
	For Open Bearings of Farm Machinery <b>PRAIRIE HARVESTER OIL</b> <small>—very heavy body, resists cold, won't thin out with moisture</small> <b>ELDORADO CASTOR OIL</b> <small>—a thick oil for worn and loose bearings</small>
	For Steam Cylinder Lubrication, whether Tractor or Stationary Type <b>CAPITOL CYLINDER OIL</b> <small>—the standard product for steam cylinder lubrication.</small>
	For Grease Cup Lubrication of Bearings <b>THRESHER HARD OIL</b> <small>—a clean, solidified oil, high melting point</small>

The Imperial Oil Co. Ltd.  

 IMPERIAL OIL CO. LTD.  
 100 WATER STREET, TORONTO, CANADA

April 5, 1917.

**QUICK ACTION**

and an absolute freedom from impurities are necessary in the lubricant used for hand separators.

**Standard Hand Separator Oil**

has all the properties to make it the best lubricating oil for the purpose. It is the best. Manufactured especially for use on the close-fitting bearings and delicate mechanism of hand separators, it not only gives perfect lubrication, but protects the separator from seam rust and corrosion.

Put up in cans of 1 pint to 4 gallons.

Sold everywhere by reliable dealers.

THE IMPERIAL OIL COMPANY  
Limited  
BRANCH STATIONS THROUGHOUT  
CANADA

**CHEESE-MAKERS!**

Are you going to continue using high-priced imported Rennet Extract—or

**Curdalac\* (P. D. & Co.)** and

**Spongy Pepsin for Cheese-making?**

During the season of 1916 these two coagulants satisfactorily replaced Rennet in scores of factories; gave full yield of fine-flavored cheese, and with great saving in cost.

Ask the nearest supply dealer for information regarding the use of these products, also for prices and descriptive literature.

\*The term "Curdalac" is used to distinguish the liquid milk coagulant manufactured by Parke, Davis & Co., Walkerville, Ont.

PARKE, DAVIS & CO.

**Established 1856**  
Our handsome Spring Catalogue now ready. A copy will be mailed free on request.

**SOW SIMMERS SEEDS**

**J. A. SIMMERS**  
Bulbs, Limited  
SEEDS, Plants  
Toronto, Ont.

"Farm and Dairy,"

"Peterboro, Ont.

"Sales have been extra good this season, and we value highly your paper as an advertising medium.

"Yours truly,

"(Sgd.) J. W. RICHARDSON,"

"Riverside Farm,"

You, Mr. Breeder, can duplicate Mr. Richardson's experience in making sales to the 22,000 dairymen and dairy breeders who receive Farm and Dairy each week. Write us tonight for our liberal contract rates.

FARM AND DAIRY, PETERBOROUGH, ONTARIO.

writing of the mortgagee. The loan shall not exceed in amount 60 per cent. of the assessed value of the land upon which the loan is to be charged.

The owner of the land on which any time discharge the indebtedness by paying to the treasurer of the municipality the amount borrowed and per cent. thereon at the rate of five per cent. The corporation shall have an insurable interest on all buildings, machinery and other property on any lands in the township charged with the repayment of money borrowed under this act. In case of default of payment for a period of three months, the whole amount borrowed, with interest thereon at the rate of seven per cent., shall become due and payable, and the corporation will take such proceedings for the sale of the lands as the law requires.

The Attorney-General, when the act was discussed in the House, pointed out that the government did not intend that loans should be made on improvements to be built, but rather pointed out that a farmer having had the application endorsed could easily make temporary accommodation to pay off his temporary loan when the work was finished and his loan from the government treasury was available.

Members of the Opposition did not like this plan, and Mr. Wigle, of Etobicoke, suggested that municipal councils be permitted to make advances while the work was under way. Hon. Mr. Lucas approved of the suggestion, and will probably frame a clause to cover it.

The only important amendment to the act was moved by Mr. Lucas. It opens the way for the government to provide by regulation for the loaning of money to farmers for other than "permanent improvements." The suggestion was that up to one-half of the loan the farmer might use it for retiring existing mortgages. The loan will probably be made on a 30-year period at five per cent. with very small annual repayments of principal.

**A Farm Survey for Ontario**

FARM surveys represent the latest methods of investigating farm management problems. They have become very common in United States, where state and federal departments of agriculture have conducted hundreds of such surveys. Dr. Creighton, Ontario's Commissioner of Agriculture, proposes such a survey for Ontario. In a recent interview he said:

"In the province there should be put into operation at once a big scheme whereby the entire farm operations of at least 1,000 farmers could be actively reported on during the entire season. The second year the number should be increased to 3,000, and the third year, perhaps, to 5,000.

"From such a process we should be able to secure valuable data which should lead to a revival in farming. We should be able:

"1. To expose the weaknesses of the present systems.

"2. To learn to avoid waste.

"3. To stimulate business methods.

"4. To study the relations of tenant and owner.

"5. To find out the advantages of long term leases.

"6. To learn the length of life of machinery.

"7. To find out the relative profits of large and small farms.

"8. To learn the value of horse versus motor power.

"9. To secure information from beginners regarding investments in agriculture.

"10. To find the relative profits from

different kinds of farming, such as fruit, dairy, beef, seeds, poultry, etc.

"11. To secure accurate data regarding the value of good roads in relation to farming.

"12. To study the whole question of marketing farm produce.

"13. To get a better knowledge of the necessary for cooperation in buying, selling, exchanging work, implements, etc."

**CITY MILK SUPPLY****Montreal Milk Shippers Meet**

EDITOR Farm and Dairy: The annual meeting of the Montreal Milk Shippers' Association was held in the Queen's Hotel, Montreal, Que., on March 13th. There was a large number of representative shippers present. The President, James Winter of Ormatown, Que., referred to the extraordinary conditions surrounding the production of milk at the present time. The Association one year ago were considered sufficient at the time to give a reasonable profit to the producer, but poor crops and dry pastures, caused a great shortage of milk and large quantities of milk feeds at high prices had to be fed, which so reduced the profits of the producers as to almost disappear. This was followed by a more serious condition this winter, as most of the producers were crop, therefore milk feeds had to be fed to keep up the milk flow. Usually supply of bran and other feeds in a fall when the price is lowest, but last fall only a limited amount could be procured. Consequently since December most producers were purchasing these feeds as they could be had. As the supply was limited and embargoes and imperfect transportation intensified the situation so that new feeds could only be had in small quantities and at almost prohibitive prices. All feeds had increased from 40 to 70 per cent. milk cows had increased from 30 to 50 per cent. and labor can hardly be had at any price. Also the cost of everything that enters into the work of the dairyman, dairy utensils, implements, tools, etc., has also increased from 50 to 150 per cent. So much has the dairymen had to contend with these conditions this winter that the price of milk fixed by the association last fall was not sufficient to compensate the dairymen for his feed and labor. Even with the advance heavy losers in producing milk for city trade this winter, but were patriotic enough to stay by their business at this critical time.

**Summer Prices.**  
On the summer prices of milk and cream coming up for discussion, expression of opinion was taken and shipper after shipper stated that unless he could get at least 25 cents per gallon this summer, delivered in his city, he would either quit the business or send to the cheese or butter factory. Had a vote been taken it is likely this price would have been recommended, but under prevailing conditions the meeting thought it wisest to refrain from recommending a price at this time.

The cream shippers claimed the need of a price corresponding with the milk, at least five cents per cwt. but later fell.

A number from Ontario stated objection to milk being shipped to the dairies from factories received from which was a gross injustice to the shippers that had complied with the city regulations, at a considerable ex-



pense, and put up a high class milk. This matter was referred to the Committee on Sanitary Regulations.

The question of extension work with the directors to deal with, it from which milk and cream is shipped to Montreal be sub-divided and placed under a director, with instructions to canvas for members or apply to the Executive for a canvasser.

Financial Statement.

The financial statement showed a balance on hand of \$65. It was pointed out that the Association needed more funds for extension work, and it was decided that the question of raising the members' fee to \$2 would be brought up at the Semi-Annual meeting in September.

We invite every milk and cream shipper to unite with the Association and cooperate in furthering the interests of the producers.

If you are not a member of our Association we will be glad to enroll you as such on receipt of the member's fee of \$1 and the enclosed form properly signed. Send money by Post Office or Express order. In no case send money in a letter without registering same.

The following Committees were appointed:—

Railway:—S. E. Smith, James Winter, W. F. Emper, W. G. Rodgers, D. A. Macfarlane, T. O. Bourdon and W. F. Stephen. Sanitary Regulations:—S. E. Smith, H. S. Tannahill, P. D. McArthur, Frank Manson and W. F. Stephen.

Officers Elected.

The following officers were elected:—President, S. E. Smith, Lachute, Que.; 1st Vice-Pres., Paul Denis, Vaudreuil, Que.; 2nd Vice-Pres., James Winter, Ormstown, Que.; Secretary, W. F. Stephen, Huntingdon, Que.; Treas., H. S. Tannahill, P. D. McArthur, R.R. No. 2, Que.; Directors, Geo. Wightman, Lancaster; Alex. Black, North Lancaster; Mansel Gibson, Vanhook Hill; J. P. Snider, Bainsville, Ont.; Andrew Fawcett, Inkerman; Daniel Malvern, Winchester; G. O. Bages, Mountain, Ont.; D. H. Brown, Glenelm; Alex. Younle, Brysonville; Geo. McArthur, Howick; David Black, Lachute; Gordon Miller, St. Hermas; Tyson Robson, Comox; Edward Bouchard, St. Eustache; V. L. Robinson, St. Eustache; Charles Curtis, Warden; E. Castonguay, Vaudreuil; Felix Lebeau, St. Paul l'Ermitte.

Hector LaTourneau, St. Constant; Joseph Brosseau, Cote Ste. Therese; P. O. Bourdon, Chateaugay; J. R. White, White's Station; R. H. Galbraith, Upper McEburne, Que.—W. F. Stephen, Secretary, Huntingdon, Que.

FARM CHATS

H. Percy Blanchard, Hants Co., N.S.

Mary's Little Lamb

H. Percy Blanchard, Hants Co., N.S.

IN that immortal poem written indelibly upon the memory of every coveted possession, a little lamb. We recall its devotion to Mary, its cold rejection at the halls of learning, and it is explained to us that the sheep was merely a matter of reciprocity. The ultimate and sad fate of the pet is not recorded by the poet; but tradition informs us that like many others of its kind it found its way to the butcher's stall in the good old times (for the con-sumer) when mutton was cheap.

And so the butcher bought the lamb, And much to Mary's sorrow, She only got, with the skin thrown in,

About ninety cents or a dollar.

Now I had to alter "sorrow" to "sorrow," to make it rhyme with "dollar." At the same time, I am convinced that Mary felt so grief stricken at the low price the butcher gave her, that she would not give a single what word rhymed with her little lamb. Not only so, but nowadays a good many words suffer quite a twist to rhyme with dollar.

Yet, in spite of this bucolic tragedy, our governments are urging us farmers to keep sheep, and more sheep. To hear some of these advocates who have such a disinterested solicitude for the farmer's welfare one would think the keeping of sheep meant a big barn yard full of sheep, the weeds their only nutriment, and around Easter a market wagon gathering up festive, fat and frisky lambs, at ten dollars per.

So I bought some sheep, anything with four legs and a bit. In fact, it was the only way to get them, a little cull here and there. There was no culling out that fall; my endeavor was to winter them all, about forty. Some pulled through, and then again some died. There was a small crop of

lamba. The next summer I bought some more. But the second winter, a disease, a sort of diphtheria or goitre, took a lot of them, and others began to get stupid and dizzy, and then swell strychnine, with the result that next summer, lambs and all, I had a small crop. However, in 1915 I purchased a choice prize winning Shrop ram. The ewes, about fifty, I divided into two flocks, a dozen of the best to lamb in March, the rest in June. In this prime flock were two pure Shrop ewes. People tell us that sheep are nurse and veterinary and old grand, with a baby's bottle in hand from dawn to dewy eve and often to midnight, ministering to those lambs. If milk; and if the ewe was chuck full of cream the lamb was either too weak to suck or too blamed stupid to know what to suck. Or, third—hypothesis, the ewe was too sickly or too modern to even own the lamb, let alone to al-gain low it near her. When I think of those days and nights, and they are again on me, I marvel at the patience of Job; and recall the fact that Moses he was deemed fit to lead Israel, but in forty years in the wilderness trailing round after a lot of sheep.

But it seems to me that the greatest wastage in sheep is the ewe that is a poor mother. My sheep are well fed and well housed. While one ewe will drop a single or twins, take right to them, and bring them up on fat, another ewe, just as fine looking, will only so, but it gets to be a habit. Every man has his hobby; one man breeds white Holsteins, another pro- duces collar button Ayrshires. It is oping maternal instincts and affec- tions in the sheep.

So every one of my sheep now has its numbered ear-tag. In the barn is lambs, a record of progress and suc- cess or failure will be entered. Upon two years of that record her fate will rest. By eliminating the non-produc- tive ewes, the next step will be to have their successors, their lambs, satisfactory. Here is a real difficulty for one person. Much depends, no doubt, on the ram, and shall I chance it on a purchased ram or in-bred for my purpose? In my flock, the "low- bloods" are better mothers than the aristocrats. I have a big Oxford.

Two years ago she dropped a beautiful lamb in the pasture, and walked away and left it. Last spring she had twins, and would not even own up her last chance at my expense. Last year my best Shrop did the same trick as the Oxford. On the other hand, I have four long legged, long nosed, less mutton, that take care of their lambs as if every one of them were a Lord Fontenoy. If I could get their maternal instincts and abilities in my pure bred, sheep keeping would be a joy. But o n this subject, as the old time writers used to say, more anon.

A Busy Commissioner

MOMENTOUS plans for the pro-mo-tion, improvement and extension of agriculture, are under consideration by Dr. G. C. Creelman, Ontario's new Commissioner of Agriculture. An idea of the extent of the work under consideration may be gleaned from the following outline (re-view with Dr. Creelman by a member of the Toronto press.

"Additional labor from other provinces.

Additional labor from the United States.

The cooperation of the Board of Education in securing boys from the High Schools and the Collegiate In-stitutes for the land for four months from April 30.

Winipeg retired farmers back to the land through a patriotic appeal by the Resources Committee to over 300 patriotic associations in the province farms this summer.

The establishing of seed farms.

The perpetuation of pure strains of seed.

Adapting crops to the soil.

Co-ordinating the work of the branches of the Agricultural Department and cooperating with the Federal Department of Agriculture.

Linking up the work of the Ontario Agricultural College with the farmers on their own farms.

Broadening the activities of the department.

Investigation of the potato question and encouragement of Ontario growth of seed potatoes.

Investigating of cold storage facilities with tests of the keeping qualities of foodstuffs.

Promotion and encouragement of

30 lb. MILK Rag-Apple Waldorf (28986) Born April 28, 1916

HIS SIRE SIR PONTIAC RAG APPLE, a son of RAG APPLE KORNDYKE, 8th, who has sired a 30-lb. Jr. 2-year-old, a 25 and 23-lb. Jr. 3-year-old, and 4 other 20-lb. Jr. 2-year-olds.

RAG APPLE WALDORF—

is a show bull, evenly marked and he is bred to produce. His three nearest dams and his sire's sister—four cows in all—average over 30 lbs. butter in 7 days. Write us about him or come and see him. He is priced to sell.

WE HAVE some good baby boys from our 29 lb. bull PIETJE PAUL, from daughters of INKA SYLVIA BEETS

HIS DAM GIPSEY QUEEN RHODA, who has a record of 30.71 lbs. butter from 548 lbs. milk, 85 lbs. milk 1 day, average fat 4.4%. Her sire is a brother to QUEENIE L., a 26-lb., 5% cow.

POSOH, and from daughters of PLUS BURKE, with records up to 26 lbs., 3rd calving, and 100 lbs. milk in 1 day.

WELLINGTON, ONT. BELL PHONE

A. D. FOSTER & SONS BLOOMFIELD, ONTARIO

HOWELL STATION, C. N. R.

cooperative societies for the handling of farm products.

Engaging the interests and directing the energies of wealthy men in the province in agricultural pursuits.

Loans to the farmer at reasonable rates of interest.

Immediate increase of farm crops by better methods.

Twenty per cent. increase of grain by the use of the best seed.

Adoption of proper farm accounting system and resultant improvement of agricultural methods.

Encouragement of live stock and the use for breeding purposes of only the best pure bred male animals.

The extension of the Ontario Veterinary College course to four years.

Preservation of female live stock—calves, pigs and lambs—and resultant increased stocks.

Adoption of measures to increase the local consumption of Ontario's apple crop and prevent importation.

Doubling of poultry flocks.

Wool grading by Government graders.

Cheap and efficient waterworks plants for farmers.

Grading the butter.

The actual work in connection with the fulfilment of these plans does not, of course, devolve on Dr. Creelman.

His position is an advisory one. The giving of advice and formulating of schemes, however, to cover so wide a field, is "a man's job."

#### Disinfection of Stables

CHEMICAL disinfectants are used to good advantage in controlling disease, and the following directions for their use are given:

1. Sweep ceilings, side walls, stall partitions, floors, and other surfaces until free from cobwebs and dust.

2. Remove all accumulations of filth by scraping, and if woodwork has become decayed, porous or absorbent, it should be removed, burned, and replaced with new material.

3. If floor is of earth, remove four inches from the surface, and in places where it shows staining with urine a sufficient depth should be removed to expose fresh earth. All earth removed should be replaced with earth from an uncontaminated source, or a new floor of concrete may be laid, which is very durable and easily cleaned.

4. The entire interior of the stable, especially the feeding troughs and drains, as well as milking stools and all other implements, should be saturated with a disinfectant, as cresol compound (U. S. S. or carbolic acid, six ounces to every gallon of water in each case. After this has dried, the stalls, walls, and ceilings may be covered with whitewash (lime wash), or a gallon of water should be added four ounces of chlorid of lime.

5. All refuse and material from stable and barnyard should be removed to a place not accessible to cattle or hogs. The manure should be spread on fields and turned under. In addition, the yards should be disinfected by sprinkling liberally with a solution of copper sulphate, five ounces to a gallon of water.

The best method of applying the disinfectant and the lime wash is by means of a strong spray pump, such as used by orchardists.

This method is efficient in disinfection against most of the contagious and infectious diseases of animals, and should be applied immediately following any outbreak, and, as a matter of precaution, it may be used once or twice yearly.

"Bad luck that for poor old Bill," said Jinks the chauffeur. "He got fined for taking out his employer's car without permission."

"But how did the boss know he took it?"

"Bill ran over him."

## Growing the Corn Crop

An Interview with Henry Glendinning

"TWO CROWS reign supreme on our farm, alfalfa and corn. We grow other crops, but these we regard as the standbys of the dairy farm. They together form the ideal basis for the dairy ration of a dairy cow, no matter of what breed or what her powers of production may be."

"The varieties that we prefer are only the Leaming and Wisconsin No. 7. We inches apart, using an ordinary seed to the acre. We plant 15 to 20 lbs. of seed to the acre. This seeding is not heavy but we often have a thicker crop than seed to the acre, because we get good seed of high germination. It was once and use the southerly in hills have decided, however, that we get a bigger crop and better ears when we plant in drills. It stands to reason that this should be so. In the hills, all the stalks grow together. Dotted along in the drills, each stalk has a feeding space of its own. We haven't had much trouble in keeping our fields clean either and when cutting time comes the drill seeding is a decided advantage. With the work of the binder was a series of breaks, hard on the binder and on the team that drew it."

"In preparing a field for corn, we plow in the fall and then plow again in the spring. Bear in mind our corn is not always on the sod. If on the shallow and then just work the surface in the spring. If the corn crop is to follow alfalfa, we would plow immediately after harvest, cultivate the winter and plow again in the spring.

"Barnyard manure is the only fertilizer we use. The application depends upon the amount of manure we have. For one year, for instance, we are putting it on at the rate of 10 to 12 spreader loads to the acre. We use a gauge for all of our corn land and we gauge the spreader accordingly."

"The Place of the Harrow. "Before planting we roll and just as soon as the seed is in the ground we cross harrow and let it lie for two or three days. Then we give it another stroke with the harrows to do. Looking over the field we cannot see any weeds that may be sprouted, any weeds at this time; they are just coming in up we harrow crosswise again trying to do the reverse way to what we did before. When the corn attains a height of six inches we use the weeder, an implement made somewhat after the manner of a hay rake, but with two rows of long slender teeth. The reason that this implement is more common I suppose is that it is accordingly small and they don't care a good many miles. I gave \$10 for mine and keeps a fine much and kills the weeds without pulling the corn. We use it even if the corn is a foot high. Our fields are clean and we never use a hand hoe unless it be to cut some thistles occasionally. Last year labor was so short that we did not cultivate our corn, but had it not been for the bean harrow and weeder, it would have been worse."

"When we can no longer use the weeder, we start the cultivator. Our cultivator is a three-horse machine, which straddles two rows of corn, cultivating one row and half of two other rows. It has two. The advantage makes it very steady. The straddles of the style of cultivator that straddles

one complete row, as our does, is that there are always two rows that when equally drilled are exactly the same. There is less danger of the riding machine cutting out corn. We have an old corn cultivator with broad shares working two rows at a time that we use in case of thistles. It will cut strong roots."

"Fine Points of the Job. "We keep the riding cultivator going till the corn is three or three and one-half feet high. If we had the time we would then use the single row cultivator, but of late years labor has been scarce."

"Here is an important small point. Make the cultivator a little narrower. Keep away from the plants and don't cut the roots."

"Another small point. Don't attempt to sow three rows with the seed drill and then use a two-row cultivator the same as mine. There will not be the same even width of row for the machine to center on every trip. Also cultivate from opposite ends at succeeding cultivations as you will then have a better opportunity to cut tough weeds."

"Finally, I like to get the corn in the silo as it glazes. Frost does not injure corn seriously, but if we cannot get the corn in the silo we prefer to cut it at the proper time and let it lie. We always have it cut before the silo filling outfit comes around."

#### The Discontented Farmer

(Hoard's Dairyman.)

"I HATE dairy farming because it is too confusing, too much hard work and care," said a farmer. Then he rushed over into sheep farming, hunting for a new place in that, but he found that there were no hills in soft places. Then he went into grain growing until he found he was selling out his farm by the bushel and that an outraged nature was slowly taking her revenge out of him for trying to make money without the use of close application and constant care, the same as men must invest in other callings if they succeed. Then he concluded he would try "dual-purpose" dairying, where, you know, you can make beef at a high price and a big lot of money from milk. A lot of sardent editors told him that "there is no reason on earth why a cow should not produce heifers that were profitable for milk, and steers that were just as profitable for meat."

So he bought a fine cow from a northern bull with his skin full of beef heredity for many generations, "but from a milking strain, you know," and went in earnest endeavor, trying to get the stable cows for beef where one cow could pay her keeping in milk, he found himself an old man with nothing to show for his years of whittling about to make money out of a "soft place."

Then he thought he would go over and consult an eminent lawyer as to the secret of his success. The lawyer told him that it had been obtained chiefly by the hardest of study and the closest of application, working many hours every day for years. But that did not satisfy the farmer. "Surely," he said, "there must be some place in all our earthly callings where money can be found without so much hard work and close concentration." So he questioned a successful merchant.

laughed at him and said, "Why there isn't a farmer in the land that works as many hours in the day as I do. I am at it every work day in the year, pro-

from seven o'clock in the morning till nine at night, and then sometimes I work until midnight on my books." But that did not satisfy the farmer, and he questioned doctors and he found that it was only the lazy ones who had as many leisure hours and they were poor as Job's turkey, and so it ran everywhere. Nowhere could he find a chance to get hold of money without close confinement and hard work unless he stole it and returned it to the farm and said, "What a fool I have been that I did not see things in their true light."

#### Tankage for Hogs

TANKAGE, as a supplement to corn rations for hogs, is more profitable than linseed oil meal at present prices, and for nearly all classes of hogs is a more valuable feed.

Recent tests at the Minnesota Experiment Station are of interest to every hog raiser who does not have plenty of milk or butterfat. R. C. Ashby, in charge of swine at the University Farm, gives the following results, with hogs fattened for market.

Of five groups fed from December 22, 1914, to February 24, 1915, were fed on corn, shorts, and tankage, and one on corn, shorts, and oil meal. The average ration for the tankage lots was:

Shelled corn 84.45 per cent.  
Shorts 7.37 " "  
Tankage 7.47 " "  
The average ration of the oil meal lot was:

Shelled corn 77.83 per cent.  
Shorts 8.20 " "  
Oil meal 13.68 " "

The total weight of the oil meal lot was 136.75 pounds; the total weight of the tankage lot was 117.17 pounds; the number of pounds of grain for each 100 pounds of gain was 531.13; the number of pounds of fat was 138.83 pounds; final weight 228.17 pounds; the average daily gain 1.39 pounds; the number of pounds of grain for each 100 pounds of gain 531.13; the profit per bushel of grain 12.5 cents. All feeds were paid for at the following prices: Corn 50 cents a bushel; tankage \$24 a ton; oil meal \$36 a ton, tankage \$50 a ton.

Tankage Scores Again. From December 24 to March 25, Mr. Ashby had on feed five lots of fat pigs, each lot receiving somewhat different rations. Of these one lot was fed corn, shorts, and tankage, while a second lot was fed corn, shorts, and oil meal. The tankage lot had an average gain of 0.722 pound a day, and the oil meal lot 0.621 pound a day. The tankage lot fed made 100 pounds of gain for each 176 pounds of grain eaten, while the oil meal lot required 160 pounds of grain for each 100 pounds of gain. The feed cost of 100 pounds of gain on the tankage lot was \$4.32 and on the oil meal lot was \$5.57.

"Tankage is a product marketed by the packing houses and is obtained from animal carcasses—Blood, meat scrap, etc. It contains 60 per cent of protein and from 15 to 17 per cent of mineral matter, while the oil meal contains 31 to 33 per cent of protein and from 6 to 7 per cent of minerals. Mineral matter is used to build bone and frame, and protein is used to develop muscular tissue, blood, and so on. Tankage is rich in lime and phosphorus, two materials greatly needed by young hogs and brood sows.

A certain amount of oil meal is avoided, but a mixture of the two feeds is better. The man who can supply all his feeds at home is fortunate. He who must buy should secure those materials which serve his purpose best and give the largest return for his cost.

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**Diseased Liver**

I HAD a sheep which was sick for a week. She went around with her head down, and would not eat anything. She seemed to be blind as she would run up against things and fall down. I opened her, and she was as fat as a sheep would be in summer time. She was carrying three lambs. Her liver looked as if it was soaked, and the lungs could be moved through it as though it were cooked.—A. T. Hastings Co., Ont. This form of liver trouble occasionally occurs and its cause is not well understood. Feeding food containing large quantities of saccharine matter is supposed to cause it, as large quantities of roots. The condition cannot be definitely diagnosed and in most cases is not suspected until a post mortem is held, and even then it may be diagnosed there is no known treatment that is effective.

**Postal Card Reports**

Correspondence invited.

**PRINCE GEORGE, P. E. I.**

KENSINGTON, March 23.—The weather all this month has been fine and mild with good hailing. There has been a lot of mussel mud hauled this winter. Feed is a little scarce, straw especially. Cattle are looking well this winter; farmers are seeing that it pays to keep them better to get the most profit in the summer. Potatoes are expected to be very high if the steers and vessels can get them away off the island. Hay is selling at \$14; straw, \$1; choice steers, 10c; butter, 35c to 40c.—T. G.

**CARLETON COUNTY, ONT.**

BRITANNIA HAY, March 21.—The roads are good, there being a few cold nights, and farmers are getting in and wood. Hay is \$9 to \$12; oats, 70c; wheat, \$1.50; buckwheat, \$1.50; corn, \$3 a bag; butter, 40c to 45c; eggs, 40c a doz.; turkeys, \$1 a bag; carrots and beets, \$1.50 a bag; pork, light, \$25; beef, \$14.—J. A. D.

**DURHAM COUNTY, ONT.**

CAMPBELL CROFT, March 23.—The last few days have been good sap weather. The snow is very deep in the bush. Very few are making syrup. At recent sales, stock and milk are sold at high prices, cows selling from \$85 to \$100; sheep, \$20 to \$27; sows, \$60 to \$65; horses, \$50 to \$100; oats, 55c to 80c; barley, \$1.15 to \$1.20; eggs have dropped in price, 50c, too low for the feed. The outlook for small pigs is poor. Seed grain is scarce and high in price. No potatoes have been offered so far. Cattle have not wintered very well, fat cattle selling at \$10 a cwt.—J. A. T. I.

**GOOD BLOOD FROM THE A. D. FOSTER HERD.**

At this time we are offering a young bull of exceptionally good dairy type, Rag Apple Walder. He has a wonderful straight top line, a clean cut shoulder, good crest, and a beautiful head with a full eye. He is good in the heart, deep bodied and is wonderfully well veined. He is evenly marked, about half and half, bay and white. If he is well cared for until show time he will make it interesting for his competitors. His sire, who is a son of Rag Apple Korndyke #10, is a worthy son of such a sire. We have personally seen Rag Apple Korndyke #10 and his daughters at Pine Grove Farm, some few weeks ago. They are one of the best, if not the best, lot of heifers I ever saw. The Junior 2-year-olds, which were springing and freshening, have every mark of being wonderful producers. One of the outstanding features, as I saw it, was the size and the firmity of well-balanced udders. This surely is one of the most important features of a sire's daughters. The dam of Rag Apple Walder is Gypsy Queen Rhonda, a cow with wonderful quality, straight and square, with a very heavy and well-balanced udder. Her record of 111 bottles and 44 lbs. milk was made in July, in very hot weather. She is now in the herd of R. M. Holby of Fort Perry, Ont. Mr. Holby stated that after being in milk 10 months, she was giving from 18 to 40 milk per day, ordinary herd work. He also stated that he intended to give her another test, and thought she would make a wonderful yearly record. Anyone wanting a good bull of 10 lb. breeding and from a 30 lb. dam, will do well to write to us. See our announcement elsewhere in this issue.

**ANOTHER BREEDER TO PRINCE EDWARD.**

Recently one of our readers of Farm and Dairy, and a breeder of good Holsteins, Mr. F. J. McAlpin, of Korndyke Stock Farm, Ganaroco, moved down into Prince Edward County, where his

herd is already beginning to carry on the good work started at his former farm. In a letter from Mr. McAlpin, recently, he says: "Our herd of pure bred Holsteins have become accustomed to their new home, and are coming along nicely. We had not intended doing any testing this spring, owing to the change we were making, but Korndyke Elsie DeKol, 22434, our first Junior 2-year-old to freshen after our arrival here, was so promising that we could not resist the temptation, and we are now well pleased that we gave her the chance, as she responded to our work with the nice record of 293 lbs. of milk and 18.44 lbs. of butter in 7 days. This is the 3rd daughter of Frontier Korndyke King, our former herd sire, that has been tested as Junior 2-year-olds, and they have all made over 15 lbs. in 7 days. We have another heifer, a daughter of Pontiac Artis Canada, due in a few months, and from which we expect something great, that is coming along nicely. She is in calf to Chumton Echo Sylvia Pontiac. Mr. A. C. Hardy's celebrated herd sire. Since coming to Prince Edward County, we have also disposed of Korndyke Pletie Lad, a ten months' old bull of excellent type and good breeding, to Mr. C. A. Jenkins, of Bebeevon, Ont." We are always pleased to hear from breeders of dairy cattle, and appreciate any breeders advising of especially good work that they may have been carrying on during the past few months. Feel free to write us.

**IS YOUR PAPER CORRECTLY ADDRESSED.**

Please look at the address label on your copy of Farm and Dairy. See if we have your name spelled properly with the correct initials. Is there some one in your neighborhood with the same surname and initials? If so, send us your correct Christian name, also your rural route or post office box number. Have you moved recently, and is your paper still going to your former post office address, and being re-forwarded to your new paper. When writing us send all particulars, old address and new. Do this now and you have our thanks for your prompt attention.

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Please send copy of this book. The Gold in Your Stump Land and quote prices on KIRSTIN PULLERS.  
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April 5, 1917.

**SPRINGBANK NOTES.**

**EDTORD** Farm and Dairy.—We are pleased to state that the daughters of **Notethorn King Theodore**, King, our first herd sire, are proving their ability as producers at the fall. Three of his first heifers have just finished in the R.O.P. test, two of them producing 11,000 and 12,000 lbs. of milk in 30 weeks running ten of them in the test at present. All will make excellent records. We expect to make him for the near future one of the best sires of **Ayrshire** sires. We have about twenty-five yearling heifer calves, and a few worthy sires that show every quality of being record breakers. All are of the most approved **Ayrshire** sires, large in size, and when freshening have beautiful udders and large teats. A number of this progeny were exhibited at the leading fairs in 1916 with much success, and also were successful winners at the winter dairy tests, including first on Ethel of Springbank in the two-year-old class at Guilford. **Notethorn King Theodore** has the best of Scotch record to his credit in Scotland. His dam, **Wynelaud Tina 4th**, has a two-year-old record of 904 gals. of milk, and in 1910 produced 900 gals. of milk in 36 weeks. His granddam on sire's side, **Blissum 3rd** of **Barnegoch**, has one of the greatest records, circumstances considered in that country, producing 320 gals. of milk, averaging 100 per cent. butter fat in 34 weeks and giving 20.5 lbs. of milk and 8.1 per cent. of fat at close of test. Full sister of his sire has a record of 50 lbs. milk per day at 6.5 milk, and sold at 4.5 per cent. in 20 weeks, giving 35 lbs. per day at 4 per cent. at close of test.—**A. S. TURNER** Sons, Corner of Corners, Ont.

**LOOKING OVER SOME NEW YORK HERDS.**

**QUITE** recently one of our breeders of **Holsteins**, Mr. D. H. Foster, of Bloomfield, visited the manager of one of the large herds in New York State. It was one of the greatest herds of **Farm and Dairy** would be interested in some of the animals that Mr. Foster saw in his trip. We will reproduce his letter to **Farm and Dairy** herewith:

"On February 25th I visited **Henry Stevens & Son**, New York, and here I saw **Spine Farm King Pontiac 4th**, and about thirty other sires of this breed. There were of his daughters that had been tested. All of them were first calf 2-year-olds. Their average was 20.36 lbs. of butter in 17 days, and 8.33 lbs. butter in 40 days. They all given over 400 lbs. milk each in 7 days. Two others were started under test while I was there, both junior heifers. One of these was running at a 25-lb. rate. They are a wonderful set of heifers from one sire. **Monroe**, **Steele**, **Shaw** and **Head**, their cattle are good individuals, on the whole. Their junior heifer, **Artocrat Pontiac**, is a big, husky fellow, about 18 months old. He is one of the best young bred sires I ever saw, and should make a wonderful sire.

"On March 1st I visited **Stevens Brothers Co., Limited**, N. Y., and here I saw old King of the **Pontiacs**, His 44-lb. daughter, **King Pontiac Lee**, who in a month's time, to "F." Another very impressive cow was **King Pontiac Mercedes**, 42 lbs. in 21 days, at 1-2/3 years. She is a daughter of the King of the **Pontiacs**. I also saw another cow one of his daughters, under test, making 25 lbs. as a junior 2. She is a wonderfully good individual, and seems to stamp his individuality in his daughters. He has now eighteen 30-day tests, and averages 40 lbs. I also saw "B" and his dam, **Pontiac Charlotte DeKed 3rd**. She has been a wonderful cow. As you know, she was the first 37-lb. cow, and made over 1,271 lbs. butter in 17 days.

"Another very attractive bull in this herd is **King Model**, who is a son of a 40-lb. heifer, **King Pontiac**, a show animal, every inch, and somehow you cannot help but be impressed with him. They are a lot of fine-looking heifers and calves from King of the **Pontiacs**, and "B". They stand every pound he weighs, without reserve on May 15th, 16th and 17th.

"On March 2nd I visited **Pine Grove Farms**, owned by **Oliver Chabon, Jr.** of Elm Centre, N. Y. Here I saw **Heiss Fyne** **Animal**, the 56-lb. cow, a wonderful animal, with a mass of veining. She looks good for many years. In a record Judging from her general make-up, she would be capable of containing all the feed they started about while making her 56-lb. record. I also saw **Oranby Jana Seigis** **Animal**, a test-cow, making over 46 lbs. and giving 860 lbs. in 7 days. She is a cow of distinct dairy type. I also saw **King King of the Pontiacs**, a 48-lb. daughter of the King of the **Pontiacs**, with over 100 lbs. of milk in 7 days. This is a very large cow of impressive quality, also **Lady Pontiac** **Jenny**, 41-lb. one-year-old. Another one was **Oranby Grove Abson** **Seigis**, 38-lb. one-year-old, and **Oranby 37** **Seigis**, 39-lb. **Fatvieve** **Kordyke** **Pietertje**, 35-lb. Jr. 2-year-old, and **Laocelia Rag Apple** **Cornelia**, 36-lb. Jr. These last two are daughters of **Rag Apple Kordyke 5th**, whom I saw in the same barn with 6

world record cows. He is a beautiful individual, weighing about 2,200 lbs. He is much better than his photo shows him, and he is full of good growth. He is very quiet, and I found his milk and hair good. His daughters all resemble him, and I have a few very well balanced udders.

"The scarcity of help did not permit me to see any more of the great New York State herds of **Holsteins**."

**THE RODNEY SALE ON APRIL 10.**

There will be some especially good buying at the **Holstein** sale of Mr. A. D. McCann, of **Donovon Stock Farm, Hamilton Ont.**, on April 10. Unfortunately for Mr. McCann, he is located in a district where dairymen do not carry on to so great an extent, and the 50 head of heavy producing **Holsteins** will not bring the prices they would if he were located in any of the leading dairy districts. Although no official testing has been done in this herd, a system of selection has been followed from the first, and only the heavy producing ones and high sires were retained. The foundation cows, which have been used, many of the cows in this herd, with ordinary dairy cows, have produced yearly from 14,000 to 16,000 lbs. of milk. The young stock is particularly attractive, including young heifers and two-year-old heifers. The 30 mature cows, of which three of which averaged, are large and of good age. Just the kind of good **Holstein** judges would select as a sire in the province, as a great sire, as his stock will show. His dam was grand champion and sire of the **Dutchland Colantha Sir Abbeke**, has more officially tested daughters than any other bull in Canada. Owing to Mr. McCann's continued ill health, everything must be done in the best manner possible, and also for sale. The cattle have not been fitted for sale, but are in "A-1" working condition. It will be well worth seeing for many of our best breeders in Western Ontario to attend this sale.

**GOOD STOCK MOVING RAPIDLY.**

The demand for good **Holstein** breeding stock is very strong in Ontario, and breeders in general are reporting many sales. J. W. Richardson, of **Calverton**, Ontario, is a breeder of **Holsteins** from his **Riverside** herd continue to be **Rich**, **Steele**, **Chester**, **Ag**, **Ninga**, **Man**, who has a record in the **Holstein** business, have recently secured their **Canadian** **Riverside** **Stamens**, purchasing one male and four females—a very uniform brood. Two of the heifers are about King of the **Holsteins**, **Pontiac Kordyke**, who has now over 25 tests, and D. O. W. has a record of 40 lbs. per cent. of butter fat. Mr. Alex. Brodie, of **River Hill, Ont.**, has secured a fine cow, **Beaumont** **Beaumont**, and granddaughter of **King**, and G. H. **Parmentier** **Beaumont** **Beaumont**, a son of **Riverside Inka Kordyke**, butts at 2 years 20.12 lbs.

**Colter V. Robbins**, **Wetlandford**, purchased **Riverside Beauty Kordyke**, a daughter of **King Johanna Pontiac Kordyke**, and out of **Robbuck's Beauty**, butts 25.23, and also **Canary Starlight Calamity**, who has an official record of 25.46 lbs. butter, and is a sister of **Lakeview Rattler**, butts 27.54. Two daughters of **King Johanna Pontiac Kordyke**, **David Smith**, **Chardard Station**, selected a daughter of **Riverside Kordyke Pontiac Lee**, a one-year-old, butts 23.83. This is Mr. Smith's sixth purchase from **Riverside** herd during the past 10 months. **W. A. Brown & Son**, of **Alton**, selected as a herd sire a son of **Francis Bonanza**, a one-year-old, butts 23.83, a son of **King**, **Riverside Lady Johanna**, butts as a junior 2-year-old, 16.48 lbs. She is a sister of **Truller's Beauty**, butts 29.42, who is the dam of **Tullita** of **Riverside**, the offspring of **R. O. P.** and **Cham. Wm. Overholt**, **Jarvis**, and **Geo. McEwen**, **Metcalf**, also secured herd sire.

**FAT PRODUCTION RECORD BROKEN.**

I AM advised through preliminary records of the **Holstein** **Prisonier** heifer, **Alamuchy Kordyke 18**, 2470 lbs., has broken the record for fat production in the two-year class of the 30-day division, by producing in 23 consecutive tests a total of 37,222 lbs. fat. She freshened at the age of 7 years, 6 months, 14 days. Her dam, **Truller's Beauty**, broke her dam's record of 37,125 lbs. fat, when bred by **Alamuchy Farms** of **Alamuchy, N. J.** In the senior two-year class of the 30-day division, **Truller's Beauty**, **Berluzza Pauline**, 17871, freshened at the age of 7 days in 24 lbs. milk, containing 83.49 lbs. fat, or 3.90 per cent. of fat. The equivalent butts so far calculated in **Alamuchy Kordyke** would amount to 121.53 lbs.—**Malcolm H. Gardner**, **Sup't. A. I.**

**AYRSHIRES FOR SALE AYRSHIRES AND YORKSHIRES.**

Having purchased from **Senator Owen** the **Riverside Farm** at **Montebello, Que.**, and collected **Herds of Ayrshire Cattle**, and **Yorkshire** I am now offering **Ayrshires**, all ages, male and female, especially **Bull Calves** and **Bulls fit for service**. I am booking orders for **Yorkshire** pigs for **delivery in March, April and May**. Price \$3.00 each, with live to six weeks old. Registered.

Apply to **Joseph Pesant, Proprietor**, or **Robert Sinton, Manager**, **Riverside Farm, Montebello, Que.**

**TANGLEWYD AYRSHIRES**

The Leading R. O. P. Herd **Large Cows, Large Tests, Large Records, High Testers, Choice Young Bulls and Bull Calves** and a few Cows for sale.

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For Quick Sale. One choice large show bull, fashionable color, and a beauty of grand breeding. Number 1 condition, sixteen months old. Also one fine bull calf. Also O. A. C. Seed Data, \$1.00 per bushel, stock on hand. For particulars write **William Thorn**, **Trou Run Stock Farm, R. R. No. 1, Lyndoch, Ontario**. (Long Distance Telephone in House.)

**Fernbrook Ayrshires for Sale**

Bulls from 8 to 12 months old, out of dams closely related to the two greatest **Ayrshire** cows in the world, **Garraugh May Miesher** and **Jan Armour**.

**COLLIER BROS., Beachville, Ont., Oxford Co.**

**AYRSHIRE BULLS**

We offer an exceptional good pair of bulls, 13 and 14 months old, from particularly choice R. of P. sires. Inquiries for details will be pleased to give descriptions.

**W. W. BALLANTYNE & SON**, R. R. 3, Stratford, Ont.

**PEACH BLOW AYRSHIRES**

Young Stock for sale, always on hand (both sexes), from high-testing heavy producers. Good udders and large test a special feature of my herd. See particulars of those if you need a sire. **R. T. BROWNLEE**, **Peach Blow Farm, HEMMINGFORD, Que.**

**FAIRMOUNT AYRSHIRES**

Mature cows and young stock for sale always on hand (both sexes) from large heavy producing high testing cows, bred by **Robin Hood**, of **Fairmount, Imp. U.S.A. No. 4314**, son of the famous **Netherhall Robin Hood**, Imp. No. 2513. See particulars for details.

**B. J. TAYLOR**, **AYERS CLIFF, QUE.**

**Springbank Ayrshires**

For sale. One yearling bull, first in junior calf class at the **Canadian National**, and one nine-month-old bull out of the second prize cow at the **Canadian National**. Also for sale a few choice bull calves, three months old. All are of R.O.P. blood.

**A. S. TURNER & SON**, **Ryckman's Corners, Ont.**

**HOLSTEINS**

For QUICK SALE. A number of pure bred **Holstein** bull calves, bred by **Burnside** **Hogerveld Kordyke**, whose dam gave 112.5 lbs. milk one day, and 77.6 lbs. butter seven days. From heavy milk and butter udders, delivered. Write me if you want a bargain. Satisfaction guaranteed.

**Jas. Moore, R.F.D., Almonte, Ont.**

**Fairmont Holsteins**

Only two bulls left—6 and 3 moos respectively—bred by **King Seigis Alberta Kordyke**, whose ten nearest dams average over 30 lbs. butts, with almost 4.6% fat. Also two heifers in calf to **King**, due in April. Write for prices, or better terms.

**PETER & ARBOGAST, R.R. No. 2 (Perth Co.), Mitchell, Ont.**

**Holstein Cows Excel All Others**

Proof is Found in 106,000 Official Tests For Profitable Yield of Milk, Butter and Cheese. No Other Breed Can Equal Them For the Production of High Quality Milk. When Age or Accident Ends Their Usefulness, **Holsteins** Make a Large Amount of Good Beef.

**W. A. Clemons, Sec'y., H.-F. Assn., St. George, Ont.**

**CEDAR DALE HOLSTEIN BULL CALVES AT SACRIFICE**

Sired by **Prince Seigis Walker Kordyke**, 2 years, butts 29.76 lbs. butter in 7 days as a four-year-old, and with his twelve half-sisters 100 per cent. of butter. These calves are nicely bred, and out of good blood. Remember, I guarantee satisfaction or refund money.

**A. J. TAMBLYN, ORONO, ONT.**

**Holsteins For Sale**

100 choice cows, heifers, heifer calves, bulls, and yearlings, to suit your requirements and we will take you at attractive prices. Apply at

**NORFOLK HOLSTEIN-FRIESIAN**  
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Present offering—show bulls 16 mo. old, from a 60.03 lb. 2-year-old female of **DUTCHLAND COLANTIA**. **SEE ATHERTON**, **Price, \$175.00.**

**LADLAW BROS., AYLMER, ONT.**  
**R. R. No. 1, Elna County.**

**TWO SONS OF PONTIAC HERMES**

No. 1.—From a good producing half-sister of **Lulu Keyes**. His granddam was **Charles** **Clifford** the **May Bebo** family. Three quarters light in color and a fine individual. Price \$115.00. (Butts 21.25, delivered anywhere in Ont.)

No. 2.—From a 16,000-lb. half-sister of **May Deho Verbeke**. A little more white, straight and well grown, over a year old. Price \$110.00, delivered anywhere in Ontario.

**E. B. MALLORY**  
**R. R. No. 3 BELLEVILLE, ONT.**

**HOLSTEINS FOR SALE**

Six mature cows and many others to choose from, 3 to 7 years old. Would be glad to sell several heifers. Some have freshened and others are in season. Some can quote attractive prices. Write

**ISAAC H. FEE, R.R. 2, Omeas, Ont.**  
Shipping facilities G.T.R. or C.P.R.

HIGHLAND LAKE FARMS

Herd sire, AVONDALE PONTIAC (under lease), a son of MAY ECHO SYLVIA, the world's record cow for milk production and Canadian Record for butter...

LAKEVIEW HOLSTEINS

Are still in the lead. The latest Holstein year book shows that they held possible at both Toronto and London Exhibitions, 1915 and 1916...

CLEAR SPRING FARM HOLSTEINS FOR SALE

Choice young bulls of first-class breeding from grandson of Pontiac Kordyke, and some of them from 10 dams. One 3½ year old dam's record 15,74 lbs. milk, 62½ lbs butter, 10.0 P. cousin to May Echo Sylvie...

Great Demand for Pietje Bulls

Why?—Because they are such excellent individuals. Because they are all great producers. We are offering three youngsters sired by this great bull, WOODMERE...

HOLSTEINS

Could save 10 cows or better bred to the Great Bull KING SEGIS PONTIAC DUPLICATE. Has one yearling bull, and calves from 10 months...

A BULLY BARGAIN

AT HIGHLAND VIEW FARM. His sire is COUNT SEGIS WALKER PIETZORFIE, with five two-year-old daughters averaging over 35 lbs. butter in 7 days. He was a very fine...

FORSTERCREST STOCK FARMS

All bulls over six months of age sold. Present offerings, young ones, sired by sons of King Johanna Pontiac Kordyke, brother to a 35-lb. cow. Would sell one or two young cows...

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ABSOLUTE DISPENSERS OF 50 Heavy Producing HOLSTEINS at Glenora Stock Farm

Owing to the continued serious illness of the proprietor, everything on the farm must be sold. There are forty registered Holsteins, including the great five-year-old herd sire, OUVIVIA A CALAMITY ALBERGHERK (15231), a show bull from the ground up and a great sire...

GOOD PRICES AT CRESCENT RIDGE SALE

At the sale of pure bred Holstein cattle held at Crescent Ridge Stock Farm, Bright, Ont., on Mar. 21st, Jacob Leussler, A. S. Sen, realized some good prices. The top notch price was paid for their best cow...

seed meal, 4 pounds; oil cake, 4 pounds; bran, 4 gallons, and sufficient quantities of salt, charcoal and stock food. It is Mr. Purvis' belief that four pounds of cotton-seed meal will produce the same result as one pound of alfalfa...

LULU KEYS.

N Lulu Keys has a cow that approached closely to the ideal. She was a cow of big size, straight top and underline, and with a rather muscular special thing about her neck...

VICTORIA JOHNSA HOLSTEIN MEN.

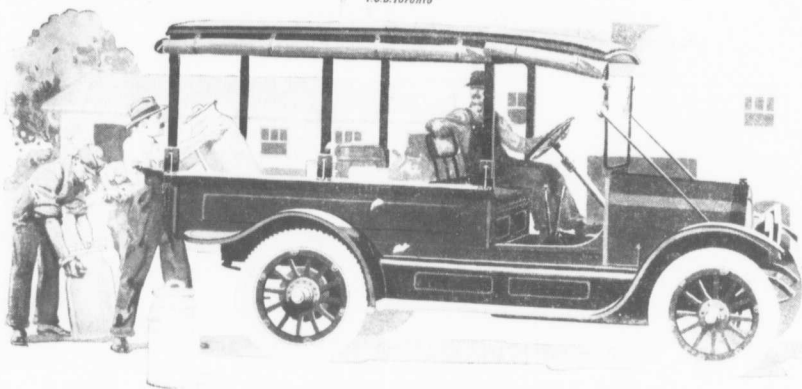
THE Holstein-Priestland Dairymen's Association in Victoria County, held their annual convention recently and elected the following officers: President, Jas. Manning; 1st Vice-President, Roy St. John; 2nd Vice-President, Bob Macneil; Secretary, Dr. W. H. Purvis; Directors, W. E. Evans, Richard Lind, P. C. Taylor, Bob Macneil; Nelson Hall, Lindsay...

Lulu Keys was found that she carried a very large milk vein, while the other was branched at the end. Upon closer examination we found that a spinal column as her stable mate, she carried a very large milk vein as open ribs, she being a little lighter in color. Her handling qualities were good. Her quarters were large and full of milk...

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Delivery Wagon  
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The Overland 1200 pound Delivery Wagon is built on the reliable time tested 35 horsepower chassis that made Overland famous the world over.

It is electrically equipped for lighting and starting and has every convenience.

The body is big and has capacity for larger bulk freight as well as 1200 pounds of weight.

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At the price \$1190 it is exceptional value for it shares proportionately in the economies of our vast production of the most comprehensive line of motor cars ever built by any one producer.

The smaller cars either panel or express type are exceptional values and equally sturdy and reliable for lighter farm hauling.

See the nearest Willys-Overland dealer at once and have him show you these wagons and the beautiful new line of passenger cars.

Catalogue on request. Please address D. partment 1216  
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Manufacturers of Willys-Knight and Overland Motor Cars and Light Delivery Wagons

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## The "EMPIRE" Milks The Champion Cows

That in itself is the strongest possible recommendation for the EMPIRE Mechanical Milker. That it should be preferred to hand milking and to any of the many other machines on the market speaks volumes for the efficiency and safety of the EMPIRE. Depend upon it, these men would never have installed the Empire or continued to use it on their valuable cows if they did not find it thoroughly satisfactory, and one of the greatest helps for the dairy farmer.

Here is the experience of the owner of many champions:

Dear Sirs,—  
We are using the Empire Milker on some cows we are officially testing and getting good results. A three-year-old has milked up to 193.3 lbs. of milk a day, and has now over 23 lbs. butter in 7 days and increasing. This is a Canadian record for age. You will probably have noticed that the World's Record Sir, four-year-old, owned in New York State, that made 46.84 lbs. of butter in 7 days, was milked with an Empire. I know definitely of several important breeders in Canada who are installing Empires this spring as a result of the work done by my machine.

Norwood, Ont., Feb. 27, 1917.

Yours truly, G. A. BRETHEN.

That the

## EMPIRE Mechanical Milker

is actually good for the cows is proven by scores of letters from Canada's most successful dairymen. Here are just a few samples of what they say about it:

Dear Sirs,—  
I have used one of your Empire Milkiers since early last April on from 30 to 45 cows continually, and can find no injurious effect on the cows. They seemed to like it from the first time, and I think gave rather more milk than with the best hand milking. Easy cows seemed less inclined to leak and hard ones gradually became easier. I have sent the milk a number of years to the Borden Condenser Company, and have had no complaints. I have just followed the instructions for keeping it clean. I could not have done without it this summer, as help is so scarce. I may say, further, that I have been milking cows for over 20 years, and have been in the milk business nearly that length of time. I have had no previous experience with milking machines, but have had very little trouble and very little expense for repairs. I have used it on heifers never milked before, with perfect satisfaction, no matter how small their teats were. The Milker has been of more practical value to me than I ever expected.

Innesville, Ont., Jan. 1st, 1917.

From John Dettlor & Sons, Stirling, Hastings Co., Ont.:

"We find the cows prefer it (the Empire) to hand milking, and their flow has actually increased."

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"The cows take to it (the Empire) and prefer it to hand milking. My herd has never shown any sign of teat or udder troubles."

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"I sincerely believe that the EMPIRE milker does much better work than the average hired man. We have 36 regular milking cows, and we keep six men, none of whom we could hire to milk cows by hand. I believe it is the best investment I ever made, and if it were not for our milker, I would not be a dairy man."

Surely no man need hesitate to use the machine which has given such results on average cows—good cows—and champions! Empire Mechanical Milkiers save time and work—lessen expenses—solve the problem of scarcity of help—and increase profits. They are certainly worth investigation!

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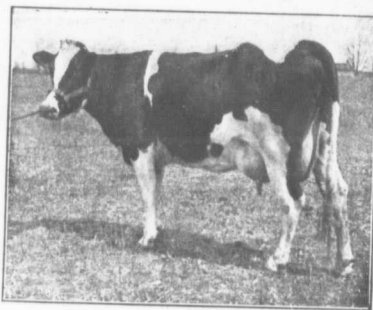
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Rauwerd Count DeKoi Lady Pauline, 12462.

The only cow in Canada to give 29,000 lbs. milk 1 year. Second largest production in the world, 1,132.5 lbs. butter. Owned, bred and developed by G. A. Brethen, Norwood. Milked with an Empire Mechanical Milker.

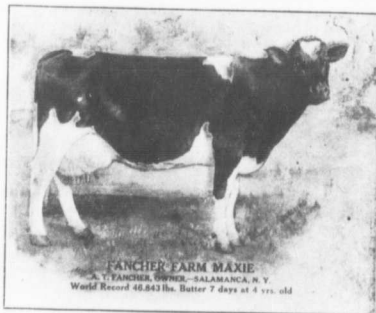


Hill-Crest Pontiac Vale, No. 18781.

Champion four-year-old cow, 22,784 lbs. milk 1 year, \$86.26 lbs. butter. Owned by G. A. Brethen, Norwood. Milked with an Empire Mechanical Milker.

From Mr. Andrew Hopewell, Britannia Bay, Ont.:

"The cows stand quieter than when milked by hand, which means a good effect on the milk flow."



FANCHER FARM MAXIE

3, FANCHER FARM, SALAMANCA, N. Y.  
World Record 40.843 lbs. Butter 7 days of 4 yrs. old

Fancher Farm Maxie, age 4 yrs.

Holder of World's Four-year-old 7 Days' Record of 46.84 lbs. of butter.

Owned by Senator A. T. Fancher, Salamanca, N. Y. This record-breaking heifer has been milked ever since she started to give milk the first time with an Empire and with each test she has bettered her previous record, which proves conclusively that the most valuable cows can be and are being milked with an Empire Mechanical Milker.