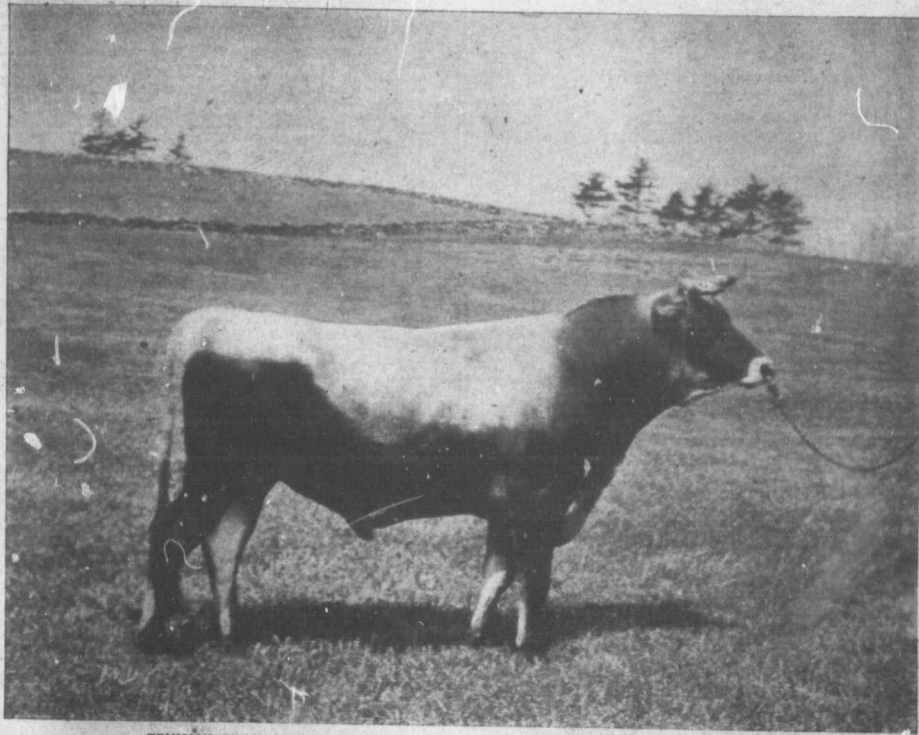


FARM AND DAIRY

RURAL HOME

DEVOTED TO
BETTER FARMING
AND CANADIAN
COUNTRY LIFE

Toronto, Ont., October 1919
Comm. of Conservation
Asst. Chairman Jan 19



TEMISIA'S OWL'S ROGUE, CHAMPION OVER ALL BREEDS AT THE VANCOUVER EXHIBITION.

Owned by the University of British Columbia. (See page 7.)

What Physicians Know About Butter

It is Necessary for Growing Children. (Page 3.)

A Visit With Peter Smith of Stratford

Tom Alfalfa Reports on Doings at "Clover Bar." (P. 5.)

Cooperative Live Stock Shipping

It is already an Approved Success. (Page 4.)

Canada's First Community Breeding Centre

The Kelowna Holstein Breeders' Association. (Page 4.)

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Farm and Dairy's Seed Competition

VISITORS at several of the fall fairs in Eastern Ontario have already had an opportunity of inspecting the results of the seed and vegetable competition conducted by Farm and Dairy. The exhibit was one of the features of the Peterboro fair and a much appreciated attraction of the fairs at Platon and Kingston. The entries were not as numerous as we had hoped, nor, in a few cases, was the quality all that could be desired. As this was the first competition of the kind ever conducted in Canada, however, it was not to be expected that exhibits would be as numerous as at the regular seed fairs. Many Farm and Dairy readers, who have had an opportunity of seeing the exhibits at these local fairs, were surprised at its extent and intimated their intention of exhibiting another year if the competition were made an annual affair. The exhibits were judged by G. H. McNeely, a professional seedman with a wide experience in judging seed and vegetable exhibits under the auspices of the Department of Agriculture. In some classes Mr. McNeely found as good samples of seed as he had ever seen, while in other classes, following government standards, he was unable to award first and in some cases even second and third prizes for the exhibits.

Special mention might be made of the wheat classes. The fall wheat submitted by Jacob Lerch, Preston, which won first place, weighed 49½ lbs. to the bushel. Fred Cable of Forest had Marquis spring wheat which weighed 66 lbs. to the bushel. Even the fourth prize Marquis weighed 61½ lbs. to the bushel. Abundance oats weighed up to 45½ lbs. to the bushel. The alsike specimens that were submitted were of extra good quality, but the timothy did not grade as well. The season for corn to show to advantage and there was only one entry worthy of a placing. Awards in full were as follows:

Full wheat: 1, Jacob Lerch, Preston; 2, Fred Cable, Forest; 3, Geo. Erwin, Peterboro.
Sowing wheat: 1, Fred Cable, 2, H. Matheys, Putnam; 3, A. Humphries, Hastings; 4, E. S. Moore, Hastings.
White oats: 1, Midway Spring Show, 2, F. W. H. Williams, 3, J. E. H. Midway; 4, H. G. Chalmers, Smith's.
Jacob Lerch; 4, H. G. Chalmers, Smith's.
Falls.
Barley: 1, Jacob Lerch; 2, Adam Humphries; 3, Midway Spring Show; 4, Clem. H. Ketchum, Hastings.
Clem. H. Ketchum; 4, Jas. R. Cannon, Avonmore.
Beans: 1, Sarah E. Kingston, Stirling; 2, Irene Chalmers, Smith's Falls; 3, J. E. Huff and Son, Bloomfield; 4, Jacob Lerch.
Peas: 1, J. Humphries; 2, E. W. Wilson, Peterboro; 4, Adam Humphries.
Clover seed: 1, J. E. Huff and Son; 2, J. H. Earl, Ida; 3, Daniel Gough, Emnismore.
Alfalfa: 1, Ivan Roth, Fisherville; 2, Mrs. Jas. N. Allen, Canboro.
Timothy: 2, Midway Spring Show; 3, J. E. Earl.
Sweet clover: 1, Ivan Roth.
Potatoes: 1, J. J. Williams, Williams, Peterborough; 2, J. E. Earl, Peterborough; 3, Harry Reynolds, Peterborough.
Carrots: 1, Irene Chalmers, 2, Jean Touchburn; 3, K. R. Petrie, Peterborough.
Turnips: 4, Jacob Lerch.

The Charlottetown Exhibition

THE Charlottetown Exhibition opened under unfavorable circumstances. The first two days were wet and stormy. The farmers could not get away on account of a belated harvest, and the railway fares were this year more than double that of former years. The two last days of the fair were good and pleasant, and there was a large attendance of Nova Scotia and New Brunswick, chiefly on account of the five days trotting meet during the Exhibition. The Exhibition tended more the form of a horse-racing meet than an agricultural fair. This was imperative,

however. The Exhibition Association got so grant as usual from the provincial government. The grant was refused "on account of the fact" which is an excuse for a great many things. The Association, however, nothing daunted, determined to have the annual fair anyway. They asked private assistance, and they got considerable from the Provincial Merchants' Association, from the city of Charlottetown, and a small grant from the Live Stock Branch of the Dominion Department of Agriculture. These aids, with their own money and enterprise, warranted them in holding the Exhibition, open to all Canada, if, therefore, there was a lot of horse trotting. It was to furnish the show of war to meet the expenses of holding a great Dominion wide agricultural fair.

Last year the total exhibits numbered 4,391. This year, owing to the many setbacks the farmers have experienced in the way of unfavorable weather, it was not to be expected that a great show would be made. They did far better than expected, however, for the total number of exhibits this year was 5,711, the third highest in the history of the association. This reflects great credit on the farmers, seeing that the prices had necessarily to be much lower than for past years. There was a slight falling off in the horse entries, but the shows were of superior quality. There was a decided falling off in cattle, there being about one hundred less than last year. In sheep, swine and poultry the entries were practically on a par with other years, both in quantity and quality. Roots and vegetables showed a slight decrease, and though an off year in fruit the entries were but 130 less than last year, which was an exceptionally good fruit year. The dairy products were somewhat superior to last year. The judges in live stock were: Horses, Dr. S. C. Manning, Ontario; and J. M. McCallum, Ontario; best cattle: Prof. Geo. Day, Guelph; dairy cattle: B. A. Bull, Brampton, Ont.; sheep: J. B. Brien, Bridgewater, N.S. This year and 1911 were as follows:

	1917.	1918.
Horses	256	216
Cattle	518	398
Swine	297	175
Poultry	480	492
Roots and Vegets.	483	417
Fruits	575	439
Dairy Products	119	114
Grain and Seeds	95	82
Plants and Flowers	207	265
Miscellaneous	230	196

Milk Price News

MILK dealers in the town of Chatham, Ont., have jumped the price of milk to the consumers 2 cents a quart, making the price 12 cents. The producers, according to a press despatch, are getting a price of 10 cents, saying that they must get more than 5½ cents a quart, or they will not supply milk to the retailers. The price mentioned is paid at the farm.

Woodstock, situated at the heart of one of the greatest dairy districts in Canada, has always gotten its milk cheaply. The price of milk was recently advanced to 12 cents a quart, or nine quarts for a dollar if paid in advance. The former price was 10 cents a quart. The largest distributing company in the city of Woodstock is owned cooperatively by a number of large producers.

A Hamilton paper reports that the Wentworth Milk Producers' Association, which had planned to demand an advance for winter milk, similar to that at first demanded by the Toronto Producers' Association, has now determined to be content with summer prices following on the action of the Toronto Association, which because of the large fall milk flow has received its previous order for an advance to \$2.80 per eight-gallon can delivered.



We Welcome Practitioners

Trade Increases the

VOL. XXXVII.

I TAKE it there are

production of milk. One I put first. It is feeding of the cow. It is not the cow. Now, it is important to a man who has stored a knowledge that he has the proper handling of mind about the man, get the ones in the barn as I will get the milk no cow before or not. You her in six months or instead half as much as the man who handles the animal and that is where

I remember a man who driving a stage coach. man would get mad and would keep them in they were never able to ever satisfied. It works with a cow. The same time the cow does not he wishes, remonstrate with the stool, is not got a success.

I used to wonder who who drove the stage coach and for used to say that good for nothing. How many a man who has been running a gasoline engine the engine did not work no good for him to be could not make anything used at the engine no he used his brains. Have a man who cannot temper, give him a train

We have the man first

second and then the man her. There are the thant things.

Grade Cows Advise

Let us consider the cow breeding. You might breed cow that would be market at from \$400 to this is not the kind of cow we give \$500. I seem many men ambitious into the breeding of pure this service. One or two kind the experience, has been can make a success the foundation stock to this province the greatest herds will be made by and in buying a purebred we can do for Nova Scotia simply because they are cost of their record.

It is the work of the A up a herd which will produce herds of the same any sympathy from me to females, unless I recognize ability to go ahead with which I am glad to do we can do for Nova Scotia to be found and sell them

* An Address to the ch of Nova Scotia.

Mention Farm and Dairy when Writing



We Welcome Practical Progressives

AND RURAL HOME

The Recognized Exponent of Dairying in Canada

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

VOL. XXXVII.

TORONTO, ONT., OCTOBER 10, 1918.

NO. 41.

Three Factors That Make Dairying a Success

As Defined by Professor J. M. Trueman, of Nova Scotia Agricultural College

TAKE it there are three things necessary for the production of milk. You may be surprised at the one I put first. It is not the cow, it is not the feeding of the cow. It is not the feed which the cow eats. It is not the cow herself. It is the dairyman. Now, it is important to have a man who thinks and a man who has stored away in the cells of his brain knowledge that he has built up by years of work in the proper handling of cows. You may say, never mind about the man, give us some great cows like the ones in the barn at the Agricultural College and I will get the milk no matter whether I ever saw a cow before or not. You will not do it; you will ruin her in six months or milk her so that she won't produce half as much as she should produce. It is the man who handles the animal who must have the knowledge and that is where we come back to every time.

I remember a man whom I once knew who was driving a stage coach. About every other day that man would get mad and give the horses a kicking and would keep them in a nervous condition so that they were never able to do the work and nobody was ever satisfied. It works the same with a cow. The man who, every time the cow does not do just as he wishes, remonstrates with her with the stool, is not going to make a success.

I used to wonder what the man who drove the stage coach was good for and used to say that he was good for nothing. However, eventually we found a place for him, running a gasoline engine. When the engine did not work right, it was no good for him to beat it. He could not make anything by getting mad at the engine so he kept cool and used his brains. So if you have a man who cannot keep his temper, give him a tractor.

We have the man first, the cow second and then the feed to give her. These are the three important things.

Grade Cows Advisable.

Let us consider the cow as to her breeding. You might get a pure-bred cow that would sell on the market at from \$400 to \$500, but this is not the kind of cow you want to give best results. I have seen many men ambitious to get into the breeding of pure-breds. I would not give the advice. One or two here and there who have had the experience, have the capital and the ambition can make a success of pure breeds to furnish the foundation stock to use with a grade herd. In this province the greatest improvement in the dairy herds will be made by the use of pure-bred stock, and in buying a pure-bred sire care should be taken to study up his ancestry. Too many bulls are sold simply because they are pure-breds and not on account of their record.

It is the work of the Agricultural College to build up a herd which will provide pure-bred sires for the grade herds of the province. You will never get any sympathy from me if you come to buy pure-bred females, unless I recognize that the man has the ability to go ahead with the pure-bred business in the best case I am glad to do what I can for him. What we can do for Nova Scotia is to get the best females to be found and sell their sons to improve the herds

all over the country. This is the work which the best breeders of pure-breds are doing.

These bulls should be taken good care of and be used for a number of years. A man told me to-day that he had to sell his Ayrshire bull, because he was getting cross, and he was only three years old. If he was a good bull, he was just throwing him away as far as breeding was concerned.

If you get a good bull and breed to grade cows, the next generation will be more than half as good again as their dams. In the second generation you will use the same bull on the 50 per cent heifer, this generation will be 75 per cent pure. The next time you may use another bull just as good, preferably bred along the same lines in an endeavor to get a definite strain of blood introduced into your country. In this way you will get the progeny 87 per cent pure.

So by buying a bull of the right kind and using him on these grade cows and keeping this up for five generations, which means 10 or 12 years' work, you have your herd 98.75 per cent of the right blood.

to find enough to go around and we have to use the poor ones.

I do not want you to think I am opposed to the right man going into the breeding of pure-bred cattle, but I will say that the general farmer who is producing milk is better off with this kind of stock than he is to try to breed pure stock. Even if they do sell at a high price there is nothing in it in the money way and you had better leave it for the men who have time, ability, capital and a chance to keep posted on it.

We would soon crowd out the breeder who was not giving us the best of stock if we did not kill the bulls off so much. A man came to me to-night and told me the experience his society had had. First they bought a good bull which gave them good results; then they bought a poorer bull and he was not satisfactory; then they bought another and he was not satisfactory. Now they have come to the conclusion that they must go back to a good breeder and put more real money into a bull.

The Feeding of Cows.

I will just take time to very briefly impress upon you some facts in regard to the feeding of cows.

Just to keep a 1,000-lb. cow for one year, just to maintain her so she will do her work, just to pump the blood, just to keep her warm and enable her to move around would take 255 lbs. of protein and 2,892 lbs. of total nutrients. In order to produce 8,000 lbs. of four per cent milk, she will require 520 lbs. more of protein and 2,800 lbs. of nutrient. This will be supplied by 4,500 lbs. hay, 5,300 lbs. turnips, 428 lbs. of bran, 428 lbs. middlings, 214 lbs. oats, 428 lbs. cotton seed and five months' pasture. If you were to figure the cost of feed, it would be as follows:

Hay	.....	\$25.68
Turnips	.....	13.37
Bran	.....	8.56
Middlings	.....	10.70
Oats	.....	6.00
Cotton Seed	.....	12.84
Pasture	.....	10.00

\$97.54

When you give her 775 lbs. of protein and 5,692 lbs. of nutrient, you must remember that you have to feed her 225 lbs. protein and 2,892 lbs. nutrient to just keep her alive.

You will have to add for expenses \$60. Do not think that all it costs to keep a cow is to feed her. We have to add to that the labor which is equal to \$40 anyway, and then there are the various taxes, taxes, insurance, veterinary attention, bull service, etc., which will make a total of not less than \$60. The cost of keeping a cow is, therefore, \$150. If she gives 320 lbs. butter fat at 40c, the returns are only \$128. Add to this skim-milk, manure and calf and there will be a small profit. I would call your attention to the fact that it takes as much for the actual maintenance of a cow giving 4,000 lbs. as for a cow giving 8,000 lbs. This would be a good thing to impress upon your patrons' minds. Make them understand that a cow giving 4,000 lbs. milk costs as much to maintain as a cow giving 8,000 lbs. It costs so much to maintain an ordinary cow, that you cannot possibly make anything out of her.

(Continued on page 10.)

What Physicians Know About Butter

By E. W. SIMMONS

THE other day I stopped a local physician on the street and said to him, "Doc, what do you know about butter?" "I know a lot more than I did a few weeks ago," he replied. "I had children in three different families under my care who were not doing well. Nothing specific was the matter with them, but they were not growing, not developing the way they should. In the first case I prescribed certain medicine and, knowing that the child had not been drinking milk, also told the parents to give her plenty of milk and butter. There was such a decided change in the child within a week that I made up my mind it was not the medicine that was responsible. On investigation I found that the child previously had been eating butter substitutes, and I decided that the butter had caused the improvement. I then told the parents of the other children to spend their money for butter instead of medicine and doctor's fees, for in those other cases I found they had been using butter substitutes also. You ought to have seen those kids two weeks later."

At the Wisconsin Dairymen's Association last winter, I heard Miss Amery, of the University of Wisconsin, say in her address in the war hospital of what it was found that wounded soldiers who did not have milk and butter recovered but very slowly from their wounds. These same men given a liberal supply of milk and butter healed their wounds quickly.

Not only does the dairy cow produce food, not only does she produce a cheap food—indeed, perhaps the cheapest, not only are dairy products important as food for human beings, but, in the light of recent discoveries, we must look upon milk as the indispensable element in the dairy industry. There is not a business built upon some passing fancy or transient fashion; it is built upon the firm foundation of human need that will surely last so long as human nature endures.

Stick to One Breed.

In too many instances the breed is shifted. If you have been working on the Holstein and change to the Shorthorn you break down the work you have been doing. This is the story. I might talk here for a week and give lectures after lectures but I cannot tell you anything more about breeding. Improve your stock on the plan of "every time a little." Have every generation a little better than before.

One reason you get discouraged is that you do not get a bull good enough. The price is the smallest thing. When you pay \$200 for a bull you are a great deal more likely to take care of him. The trouble is that we do not buy good enough bulls. We buy poor bulls and after a year or two they are turned over to the butcher. We shift and shift and have not a chance to select as we have to use about all the bulls that are born from decent cows. If you would buy bulls and keep them for ten years, we would have to throw away the bulls that were not up to the highest mark but that is what we have to scratch around the country

An address to the cheesemakers and creamery men of Nova Scotia.

A Visit With Peter Smith of Stratford

His Farm—His Farming—His Buildings and His Stock: As Seen by Tom Alfalfa

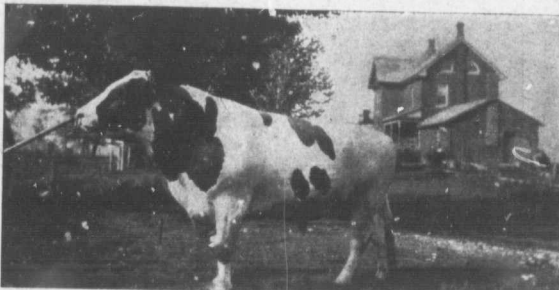
A FEW weeks ago the editor of Farm and Dairy was good enough to place in his special Exhibition Number a few paragraphs that I wrote him about the home generating light plant on the farm of our old friend, W. W. Ballantyne of Stratford. Incidentally, in that letter, I made mention of a neighbor of the Ballantynes, Mr. Peter Smith, who also has a home lighting plant.—So a fine home to put it in, a fine farm and a herd of Holstein cattle that is recognized as one of the best in Perth County. As Mr. Smith lives just a couple of miles up the road from Keilduff Farm, Mr. Ballantyne and I took a run up to see him,—my host for a neighborly visit and I to renew old acquaintanceship.

Mr. Smith is big, jolly and likable. He takes a great interest in all the duties that go with his citizenship and has served in a public capacity in his home county. He entertains high hopes for the United Farmers of Ontario, and is always ready, if his work permits, to help organize a new branch of the U.F.O. or contribute to the program of an old one. His enthusiasm for farmers' organization work is almost as great as his admiration for Holstein cattle and quite as contagious. In that time, not so far in the future, when farmers will have their own representatives in Parliament, I would not be surprised if the farmers of Perth County were to pick Peter Smith's and clothe him with the honors of an M.P. or an M.P.P. In fact, Mr. Ballantyne whispered something in my ear to this effect, while others proclaimed it aloud. Mr. Smith and I, however, talked about cows, crops and other subjects of mutual interest.

Perth is one of the real good agricultural counties of Western Ontario. I have always admired the great stretches of level rich land in the Ontario peninsula and have seen the most of it in the best way in the world—from our Ford car. I have found that Perth has its full share of good agricultural land and Peter Smith has 150 acres of it that is as good land as there is. It is all free of bush and the soil varies from a heavy to a medium heavy clay loam. It is laid out in big fields and is what one would call nowadays an ideal tractor farm, although, like myself, Mr. Smith still sticks to horses, working them in three and four-horse teams; that is, unless he has changed his mind and bought a tractor since I was talking with him. The farm is the original Smith homestead, which the present owner's grandfather chopped from the bush. I certainly commend Grandfather Smith's judgment in soil.

The Modern Barn.

One of the best features of Friend Smith's farm, aside from those with which nature endowed it, is his very modern barn. The fact that this barn was rebuilt from two old barns shows the possibilities of remodeling. The work was done in 1915. The original barn was 100 feet long by 40 feet wide with a basement under the entire structure. Mr. Smith moved another barn 40 feet square up against one



Francy 3rds Hartog 2nd, the Herd Sire at Clover Bar Farm.

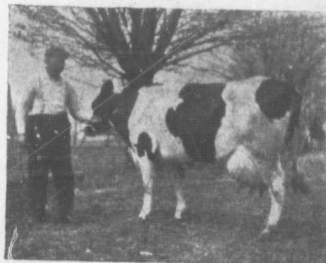
corner of the larger barn and put a foundation under it. The big stable, therefore, has a cow barn 100 x 40 feet, and horse stable and box stalls 40 feet square. There are tie-ups for 42 head, arranged in two long rows in the main barn. In addition to the two rows of cattle, there is room along one side for box stalls for suckling calves. The rest of the calves are accommodated in the new calf barn close at hand.

I admired the interior arrangements. I like to see work done the easiest way; in fact, I am lazy enough to like to do it that way myself. Evidently Mr. Smith shares this weakness of the flesh. At the end of the stable nearest the house is a milkroom, where in are cooling tanks and a cream separator run with a small electric motor. At the opposite end of the stable is a feed room. Opening directly into this feed room is the chute from the big cement silo, 14 feet inside diameter and 70 feet high. Other chutes from the granary, the entrance to the root house and, finally, the hay chute, the latter enclosed to prevent the dust filling the stable atmosphere. One might almost say that all kinds of feed were "right on tap" in this feed room. When it comes to carrying the feed to the cows, a truck is preferred to the overhead carrier, in that it can be taken wherever the feeder desires, and perhaps, too, because it is a powerful stimulus toward keeping the feeding alleys clean. Manure is removed, however, with overhead chutes. A seven horse power engine sitting in the stable chops grain, pumps water and runs the milking machine.

Remembering the hearty endorsement of the milking machine as per my friend Ballantyne, I asked Smith what he thought about it. "Well, I have just had the machine for 18 months," he told me, "and we like it very well. Some of the cows milk out perfectly with the machine, others not so well. It depends on the cows. The same is true when you milk by hand."

When he fixed up his stables, Mr. Smith made a permanent job of it. The floors and mangers are all of concrete. The equipment, even to the partitions in the calf stalls, is of steel. It is as modern

as a stable as they have in the new dairy barn at Guelph, which I can visit frequently at that institution is only sixteen miles from home. Equipment such as this, however, demands considerable cash. There are two other features of the Smith stable that might very well be duplicated everywhere. The lighting is of the best. Between one-third and one-half of the linear wall length is in window glass and the windows are those little shallow sashes stuck up against the ceiling either. The bottoms are just high enough above the floor that there is no danger of the cattle backing into them or sticking their heads through and they extend right to the ceiling. The smaller sash at the top is on hinges, swinging downwards and inwards. These sashes permit the regulation of the flow of fresh air into the stable. In the centre of the stable there is a large ventilating shaft, which carries the foul air to the roof. "There is none of that foulness in the stable in the morning when you open the door," remarked Mr. Smith, and he further assured me that the stable walls, which are of stone plastered over smoothly with cement, are always dry. These walls are whitewashed as frequently as appearances demand, the ceiling is of matched lumber and painted.



Minnie Paladin Wayne, a Good Three-year-old. She has an R. O. 3L test of 26.84 lbs. of butter in 7 days as a three-year-old. As related by Tom Alfalfa, in the article adjoining, Mr. Smith purchased the grandmother of this cow for \$23 many years ago.

Outside the barn is painted red and with a big cement silo at one corner presents a properly imposing appearance.

The Dairy Herd.

"We have always been dairymen on this farm to quite a considerable extent," said Mr. Smith, when I asked him about his herd. "We started out with Holstein grades about 30 years ago. It is about 25 years since we bought our first pure bred. We didn't put any value on pure bred then and many a time we thought of giving up registering the offspring, but some way or other we held on and now we are mighty glad we did."

I could understand Mr. Smith's satisfaction with their perseverance. If I remember rightly the grade cow which captured the sweepstakes at Guelph a year ago was a purebred from a herd where registration had been neglected. I am told that there are many such herds over Ontario and it would have been a shame if the Smith herd had been added to the list. Mr. Smith told me that he bought his first two-year-old heifer at a sale for \$23 and she was a good one. In fact, she is grand-dam of a young cow now in the herd, Minnie Paladin Wayne, with a Record of Merit test of 26.84 lbs of butter in seven days in her three-year-old form.

The milking herd had just then come to the barnyard from the pasture and I had a chance to look them over. As a whole they were a bunch of fine big cows. A few years ago they promised to make a name for themselves in yearly test work. Now, however, the more convenient seven-day test is being followed exclusively and creditable records have been made. The ability of the herd to produce for long periods is amply proven by the fact that the cows are profitable on a straight commercial basis and

(Continued on page 2.)



This Barn with its Up-to-date Stabling is the Result of Remodelling Old Barns.

The main barn is 100 by 40 feet; the ell, which was an old barn moved up, is 40 x 40. Notice the provision for fans and the cupolas, connected with shafts to the stable, for ventilation. A coat of paint adds to the appearance and makes the old barn look like new. On the farm of Peter Smith, Perth Co., Ont. All photos courtesy of Mr. Smith.

FARM AND DAIRY

Accredited Herds in the United States

One Method by Which Assistance is Rendered to Dairy Cattle Breeders Who Wish to Keep Their Herds Free From Tuberculosis

A FEW years ago the great Dairy State of Wisconsin established what is known as its Accredited Herd System. Under this system breeders of pure-bred live stock placed their herds under the direction of the State Department of Agriculture, the Department arranging to have all of the animals in these herds tested at regular intervals, and if a herd was kept free of tuberculosis, it was registered in Wisconsin's list of accredited herds. The system proved to be of advantage, both to the breeders of live stock and to prospective purchasers. Breeders who entered their herds with the Department were given assistance in keeping them clean and in the sale of surplus stock; they found it a distinct advantage to have a State guarantee as to the health of their animals. Similarly the purchaser of a pure-bred animal could buy from these herds with reasonable certainty that he would not be introducing disease into his own herd.

So successful was the system in Wisconsin that it has now been taken over by the Bureau of Animal Industry of the United States and will in due time be known as the State and Federal Accredited Herds System. The Wisconsin accredited herds will now be transferred to the Federal list and the work will be conducted from Washington. The detailed regulations adopted by the Bureau of Animal Industry and the State and by the U. S. Sanitary Board are herewith presented:

1. A tuberculosis-free accredited pure-bred herd is one which has been tuberculosis tested by the subcutaneous method, or any other test approved by the Bureau of Animal Industry, under the supervision of the Bureau of Animal Industry, or a regularly employed veterinary inspector of the State in which co-operative tuberculosis eradication work is being conducted jointly by the United States Department of Agriculture and the State. Further, it shall be a herd in which no animal affected with tuberculosis has been found upon two annual or three semi-annual tuberculosis tests, as above described, and by physical examination.

2. The entire herd, or any cattle in the herd, shall be tuberculin tested or retested at such times as is considered necessary by the Federal and State authorities.

3. No cattle shall be presented for the tuberculin test which have been injected with tuberculin within 60 days immediately preceding or which have at any time reacted to a tuberculin test.

4. No herd shall be classed as an accredited herd in which tuberculosis has been found by the application of the test, as referred to in paragraph 1, until such herd has been successfully subjected to three consecutive tests with tuberculin, applied at intervals of not less than six months, the first interval dating from the time of removal of the herd.

5. Prior to each tuberculin test, satisfactory evidence of the identity of the registered animals shall be presented to the inspector. Any grade animal maintained in the herd, or associated with animals of the herd, shall be identified by a tag or other marking satisfactory to the State and Federal officials.

6. All animals of registered cattle from the herd, either by sale, death, or slaughter, shall be reported promptly to the said State of Federal officials, giving the name and address of the person to whom transferred. If the transfer is made from one accredited herd to another accredited herd, the shipment shall be credited herd, the shipment shall be made only in properly cleaned and

disinfected cars. No cattle shall be allowed to associate with the herd which has not passed a tuberculin test approved by the State and Federal officials.

7. All milk and other dairy products fed to calves shall be produced by an accredited herd, or, if from outside or unknown sources, it shall be pasteurized by heating to not less than 150 F. for not less than 20 minutes.

8. All reasonable sanitary measures and other recommendations by the State and Federal authorities for the control of tuberculosis shall be complied with.

9. Cattle from an accredited herd may be shipped interstate by certificate obtained from the office of the State live stock sanitary officials of the State in which the herd is located or from the office of the Bureau of Animal Industry, without further tuberculin test for a period of one

be shipped just as animals not of the accredited list.

10. Reinstating a herd which has Shown Reactors.—A herd having shown one or a limited number of reactors can be reinstated by passing two semi-annual tests. Status of Young Animals.—Any animal too young to be tested at any regular herd test may be sold as an accredited animal until the official test until the next regular test of the herd.

Farm Management

The Seed Purchasing Commission

T. G. Raynor, Ottawa, Ont.

LARGE quantities of seed grain have been needed during the last two years for some of the provinces. The appointment of the Seed Purchasing Commission was the result of a meeting which the elevators and the seed companies held at a near cost as possible. Seed Commissioner Clark, who is responsible for the operation of this Commission, says that during the past year's operation they have done \$5,400,000 worth of business and show a credit balance of \$7,400, which is certainly a very small margin.

The Commission controls three elevators, one at Calgary, one at Moose Jaw and one in Winnipeg. These elevators are now equipped with cleaning plants second to none and the result is very satisfactory seed. The best seed which the elevators will sell can be found in the west each year as it is stored in car load lots in these elevators, stored and cleaned and sent out again in car load lots to purchasers all over Canada. The price is advanced enough to cover the extra cost of transportation, etc.

The result of this work has been marked in the west where this seed has been used and in Quebec, which buys in large quantities its seed wheat and oats each year. In the case of the Maritime provinces the results are not so marked as the Maritime provinces seem to be so well suited to their climatic conditions as is the White Russian variety, but which is not grown in the west.

Already this year the Commission have the right to say to any cars of seed coming east that are all suitable for seed. They are sent to these elevators to be cleaned and used for seed in those parts of the west that suffered so much from drought and frost this season. It is quite possible, in addition to the large quantities of Ontario may be needed for seed to supplement the seed from the Island and what they may have in the west. Prince Edward Island has come forward and offered to supply seed oats, of which they, too, have an abundant crop. They are good oats but the cost of transportation is greater than in Ontario, and it is likely there is an abundance this season and of excellent quality.

Fertilizers for 1919

NOW is the time for the farmer to plan his crops for 1919, and in doing so to decide upon what fertilizers, if any, he purposes to use. Last spring there was considerable disappointment among farmers, especially among those who had delayed placing their orders till a few weeks before the season opened, as there was not only a shortage of material but transportation facilities were such that fertilizer deliveries could not be made. There is no prospect that conditions will be better next spring, and it therefore behooves the farmer to be doubly careful in the selection of his seed, this to carefully consider the selection of the seed, having made his selection to place his orders, stipulating

(Continued on page 14.)

FARM C

Ben Ho

M. Percy Blanchard

ONE of the fascinating fields of the evidence of turn or rather tender surgery. We see it all as well as in the Not only the elements which nature abundance, that was seed necessities of the day civilization. The Ezekiel voices this mate, when he says of the trees were for the nation. It is coming itself into the sun, the twentieth century product of common is a fairy storyhouse thousand wonders, crushed granite or fertilizer. Then the gofaher of good clo a nitrogen factory. It will discover the cheap mixture which compound with atom just as readily as quid—when the die

We do many unuse, we only knew it, we used to think that the hog, would gorge if he got the chance put his food into a strait till he is ready enough to say, he m time. Wonderful mised and times net feeding portion of food for the home its own hopper, and nally he fed herself, with more intelligence tend to did. The water heated hen house ago has gone the way. Now, a hen house outdoors with a roof on from the wind. And of what I consider it is based on results, in houses I ever saw.

It was in Cape Breton ago. There was a man his Mr. K., who had "tract" and did a little. He kept half a dozen in a lot of oats. And of superior intelligence a real genius. When horse barn he did not eral example of thorough to the weather, but to shed to protect it, happened, or probably on the south side of great washes of water, and allowed the sun pour in. Nests were in a convenient place. Ifect paradise for the h scratched and found. They luxuriated in the warmth from the ure. Outdoors it might the chilly easterlies April, but for them spring. As to eggs, winter long. There ar having hens around. There is an argument house like the one in department, but for thought out and design that delivered the goods really so cost for me to Mr. K.'s hen Oranodale, C.B., 30 y

Our Frontis

ON the front cover of "Dairy This week" Roger 12314, who he herd at the University of Columbia. The two-ny not champion Jersey



My
Dad
wears

BOB LONG
UNION MADE
OVERALLS
SHIRTS & GLOVES
Known from Coast to Coast
G. LONG & CO. LIMITED
TORONTO CANADA

ROOFING
AT FAVORABLE PRICES
WE ARE THE LARGEST DISTRIBUTORS OF THE
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GUILD'S SUMMER SALE!

6000 choice yearling
hens and 200 yearling
cock birds in high re-
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Wyandottes, Rocks
Heds and Leghorns.
1918 Mating List gives
full particulars of
this stock. Write us
your wants - do!

L. R. Guild, Box 76, Rockwood, Ont.

SEEDS BOUGHT

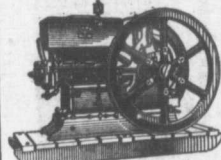
Highest Prices Paid for
Fancy Red Clover-Alaska,
Alfalfa-Timothy, and
Pure Seed Grain.

Send Samples, State Quantity
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WM. RENNIE CO., Limited
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1/2 to 60 H. P.
Stationary, Mounted, Tractor



These engines are the perfected product of years of study and experimentation with Internal Combustion Engines, and are demonstrated success on thousands of farms throughout Canada. Get one this season and let it replace your hired man. It's a genius for work and its running cost is little, as it runs on coal oil or kerosene full time. We also manufacture a full line of WINDMILLS, Grain Grinders, Saw Frames, Pumps, Tanks, Water Boxes, Concrete Mixers, etc.

Catalogue of any line mailed on request.

GOLD, SHAPLEY & MUIR CO., LTD.
Brantford, Winnipeg, Regina, Calgary.

FARM CHATS

Hen Houses

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

ONE of the fascinating thoughts in the field of invention to-day is the evidence of a constant return or rather tendency toward simplicities. We see it in medicine and surgery as well as in the mechanical arts. Not only so but it is from the elements which nature supplies in abundance, that we derive the thousand necessities of our complex present-day civilization. The Prophet Ezekiel voices this thought in its ultimate, when he says that the leaves of the trees were for the healing of the nations. It is complexity evolved itself into the simple life. Platinum, the twentieth century metal, is a product of common clay. Petroleum is a fairy storehouse that imprisons a thousand wonders. Think of using crushed granite or felspar as a real fertilizer. Then there is lime, the godfather of good clover; and clover a nitrogen factory. Some day someone will discover some fool-simple, cheap mixture which will absorb or compound with atmospheric nitrogen just as readily as quick-lime will hydrate—when the due time comes.

We do many unnecessary things, if we only knew it, on our farms. We need to think that arch-gourmand, the hog, would gorge himself to death if he got the chance. To-day, they put his food in a hopper and let him eat till he is ready to quit; and strange to say, he quits in proper time. Wonderful messes used to be mixed and limes set to the minute for feeding poultry. Now, the different foods for the hens go dry each in its own hopper, and not only does the silly hen feed herself, but she does it with more intelligence than her attendant did. The wonderful hot water heated hen house of not so long ago has gone the way of the dodo. Now, a hen house is just an outdoors with a roof on and a shelter from the wind. And now I will tell of what I consider the best, if best is based on results, in the way of hen houses I ever saw.

It was in Cape Breton in the long ago. There was a man, we will call him Mr. K., who had a "maul contract" and did a little livery driving. He kept half a dozen horses and they ate a lot of oats. Mr. K. was a man of superior intelligence, in many ways a real genius. When he built his horse barn he did not follow the general example of throwing the manure to the weather, but built a slight lean-to shed to protect it, and this, as it happened, or probably was planned, on the south side of the barn. Several sashes of glass lit the shed, and allowed the sun heat and light to pour in. Nests were fixed to the wall in a convenient place. It was a perfect paradise for the hens. Here they scratched and found oats in plenty; They luxuriated in the sunshine and the warmth from the steaming manure. Outdoors it might be winter or the chilly easterlies of March or April, but for them it was eternal spring. As to eggs, they laid the winter long. There are objections to having hens around a horse stable. There is an argument for the hen-house like the picture in your poultry department, but for a scientifically thought out and designed egg factory, that delivered the goods and at practically no cost for feed, commend me to Mr. K.'s hen house down at Oragdale, C.B., 30 years ago.

Our Frontispiece

ON the front cover of Farm and Dairy this week appears the likeness of "Fen's Owl," Rogue 152914, who heads the Jersey herd at the University of British Columbia. This two-year-old bull was not only champion Jersey bull at the

Vancouver exhibition in 1918, but was also awarded the special prize as grand champion dairy bull over all breeds. He has five direct lines to Spermeild Owl, the greatest sire of producers ever owned in America. His grand-dam and great grand-dam have each produced over 1,000 lbs. of butter in a year. He is one of the greatest Jerseys now owned in Canada and was bred in the New England States.

Philadelphia Quality.

Mary is told of an old lady who has lived all her life in Walnut Street, as have generations of her family before her. The other day she is said to have consulted a young physician fresh from his honors at the University of Pennsylvania.

"What do you think is the matter with me?" asked the lady.

"I am inclined to think that your blood is not pure, madam. I'll have to give you something to purify it."

"Sit!" said the old lady with dignity, "you are probably not aware that I belong to one of the oldest families in Philadelphia."

The Farmer-Banker Alliance



You go to your lawyer for legal advice; to the doctor for medical advice; why not to The Merchants Bank for financial advice?

If you want a loan to buy cattle, hogs or equipment—if you want information as to how to invest money—come to those who make a business of financial matters, and are in a position to give you sound and impartial advice.

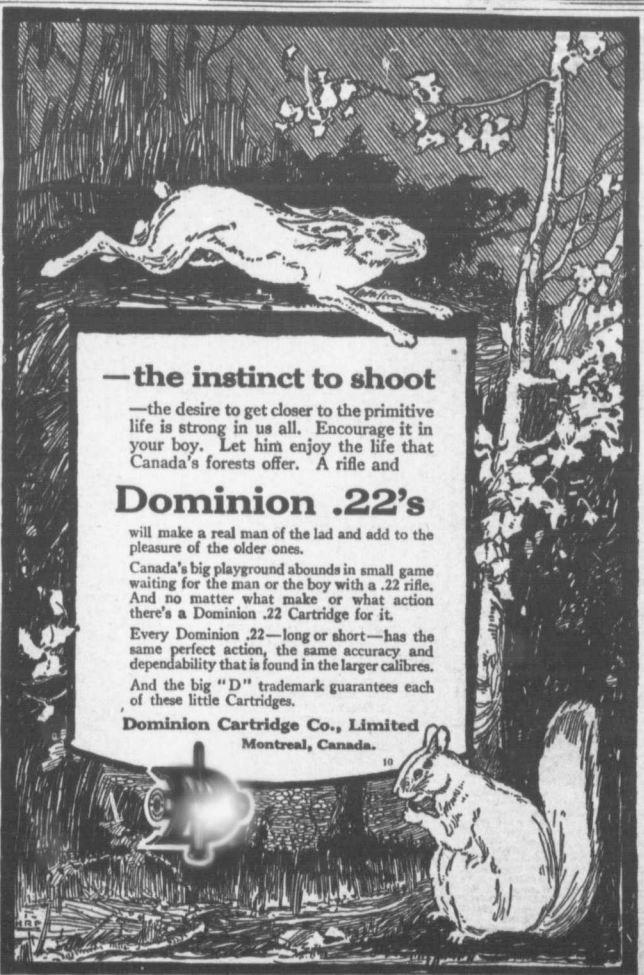
THE MERCHANTS BANK

Head Office: Montreal. OF CANADA. Established 1864.

with its 182 Branches in Ontario, 23 Branches in Quebec, 19 Branches in Manitoba, 23 Branches in Saskatchewan, 13 Branches in Alberta, and 9 Branches in British Columbia serves Rural Canada most effectively.

WRITE OR CALL AT NEAREST BRANCH.

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



—the instinct to shoot

—the desire to get closer to the primitive life is strong in us all. Encourage it in your boy. Let him enjoy the life that Canada's forests offer. A rifle and

Dominion .22's

will make a real man of the lad and add to the pleasure of the older ones.

Canada's big playground abounds in small game waiting for the man or the boy with a .22 rifle. And no matter what make or what action there's a Dominion .22 Cartridge for it.

Every Dominion .22—long or short—has the same perfect action, the same accuracy and dependability that is found in the larger calibres.

And the big "D" trademark guarantees each of these little Cartridges.

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Orchard and Garden

Orchard and Garden Notes

SAVE plenty of seed corn and seed potatoes for next year's planting.

Apples keep well, wrapped in paper and stored in a clean cellar where there are no odors.

Apples will keep better if they are picked carefully from the trees and wrapped immediately in paper and placed in boxes in a cool cellar. Rough handling causes quick decay.

Fall plowing disturbs many insects and weed seeds in the garden, consequently they do not come back next

season. As a rule the land can be used earlier if fall plowed.

It is best to feed liquid manure to plants after they have been watered with clear water, as they are likely to take the liquid manure up too rapidly.

Rutabagas cut in two and hung in the chicken house make good green feed for the chickens during the winter. Mangels, large beets and cabbage are also good.

Fall Plowing—Insect Destruction

LATE fall plowing is generally recognized as one method of preventing insect injury to crops. It may be well, however, to remind farmers and gardeners that rubbish

left in piles along fence rows or in fence corners or in the orchard or kitchen garden affords one of the best kinds of winter quarters for insect pests in various stages. Trash of this kind should be cleared away, preferably by burning. This will undoubtedly destroy many injurious insects which would lay their eggs in the spring or would complete their development in the spring.

Large numbers of cutworms and other caterpillars which pass the winter in the ground and start into activity in the spring have been parasitized by small flies which sting them and lay in them their eggs. These eggs hatch into tiny worms which live on the juices and substances of the bodies of the immature insects, so

that in the spring, instead of completing their transformation or continuing their growth and their destructive work they perish.

The subject of beneficial insects—for there is a large class of insects that are helpful—is an extensive one and should be more fully discussed among farmers than it is. They should learn, as far as possible, to distinguish their friends in the insect world. Many of the parasites mentioned are so small that they would never be observed by the farmer, but there are many predaceous insects, beetles and others which the farmer should protect. For information, see L. Washburn, division of entomology and economic zoology, University Farm, St. Paul.

Potato Seed Selection

LIKE begets like in the potato field as elsewhere, but judging by the quantities of inferior tubers used for seed purposes, the importance of this law is not appreciated by many. The use of small potatoes taken from the bulk of the crop, year after year, and used for seed will eventually lead to yields of inferior potatoes.

At potato digging time the great opportunity for seed selection is offered. With the product of each plant spread on the soil it is an easy matter to select out those plants that have given the largest yield of the most desirable type of potato and are free from disease. The potatoes from such plants only should be gathered and saved for use as seed the following year. This saving of seed at digging time may seem to many as an extra burden during a rush of work, but it is not.

There is less actual labor attached to seed selection at the time of the potato harvest than there is by practicing any other method of seed selection. Furthermore, the results from seed selection are reasonably certain, as with other methods there is some speculation. Potato growers would do well to watch closely for exceptionally good plants. These harvested and saved apart from the main crop, may become the grand-dads of fine potato fields in the future.

Supplies for Standard Feeds

THE feed situation, according to the Ontario Organization of Resources Committee, is satisfactory. Up to the present time, Assistant Deputy Minister of Agriculture, C. F. Bailey, states that 250 tons of tankage and 5,000 tons of oil meal have been purchased. Options have been taken also on other classes of feed. This feed is purchased for delivery during the months of September, October and November. They will be distributed at central points in the Province and will be sold to mills manufacturing standard dairy cattle and hog feeds in accordance with contracts entered into with the committee.

Great difficulty is being met in securing cotton seed meal in the United States. The price of this meal has been fixed by the United States Food Administration. Early in the summer the committee made arrangements with the Washington authorities to secure 6,000 tons of cotton seed meal, and this shipment will be the only lot of this concentrate that will be allowed to be brought into Canada. Under this arrangement the committee hopes to be able to make its purchases shortly and have a supply on hand when the demand for standard dairy cattle feed commences, which is likely to be about December 1.

Mr. Gordon Waldron has entered an appeal against the fine of \$500 imposed on J. F. Cross, a Brantford Township farmer, for alleged seditious utterances.

"Put Money in thy Purse!"

TO-DAY, Money is Food, Clothing and Arms for our Soldiers in the Field.

Money is the force behind production.

Money is the bedrock on which Canada's tremendous export market stands.

Money is worth more, to-day, to Canada, and to every individual Canadian than ever before in our history.

Guard your money therefore.

Use unusual caution in your purchase of supplies, equipment, improvements.

Hold every dollar ready to answer Canada's call for Funds!

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The work that is limited. For grinding other duties, it has no Canadian Fairbanks of the Case Tractor



"Yes, I'll be there to help you. See me work on my farm. I know me. I'm different." FORD MOTOR CO. Distributors



G. S. & M.

The Deaver is a tremendous heavy work tractor for Ontario farms. It operates on either 12 or 14 inch cylinders. GOULD, SHAPLEY & CO.



THE De Laval Tractors are profitable for profit consumption. For more information, contact your local agent. Model—4 cylinder—Magnet—center—1

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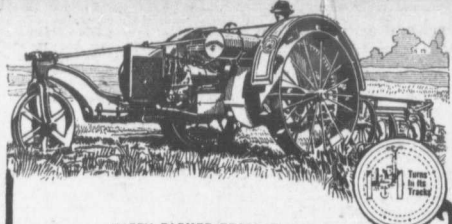
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THE CASE TRACTOR.

The work that the Case is capable of doing on the average farm is almost unlimited. For grinding feed, cutting, pumping, soil filling and a hundred and one other duties. It has no peer. A popular model is the famous 10-24 Canadian Fairbanks-Morse Co., Limited, is the Eastern Canada distributor of the Case Tractors.



HAPPY FARMER TRACTOR—12-24 H.P.

Records are not made by luck. "Happy Farmer" has its own reasons for leaving competition behind. One is its remarkable power compared with its light weight (only 3,700 lbs.). It gets no less than 2,000 lbs. draw bar pull, because of the big tractor wheels. "Turns in its own tracks." RENEW MACHINERY CO., LTD., RENFREW, ONTARIO.

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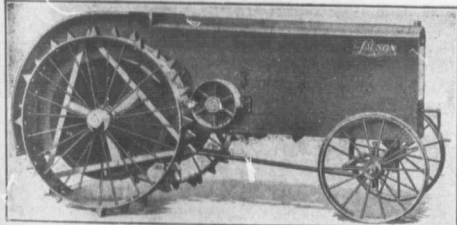
THE FORDSON.

"Yes, I'll be there to do my bit" with the fall plow. See me work on the Experimental Farm. You'll know me—"In different". FORD MOTOR COMPANY OF CANADA, LTD. Distributors of Fordson Tractors.



G. S. & M. BEAVER TRACTOR.

The Beaver is a clean cut machine built for continuous heavy work of any kind that is found on the Ontario farm. It operates on kerosene or gasoline and has Waukesha heavy duty tractor motor of four cylinders. GOLD, SHAPLEY & MUIR, BRANTFORD, ONT.



THE LAUSON—TRACTIVE 15, BELT 25 H.P.

Tractors are profitable only as they give continued satisfactory service on low fuel consumption. For this reason "Lauson" tractors are unexcelled in materials and equipment—dust proof—all gears enclosed of four "Mik" cylinder—valve-in-head Lauson-Beaver. Magneto—Sumter-Dixie. Cashier—Kinston Kerosene. See it and its work at Ottawa. Distributors for Canada THE DE LAVAL CO., LIMITED, PETERBOROUGH, ONTARIO.

TRACTORS AT OTTAWA.

The tractors illustrated on this page of Farm and Dairy will be at the big International Plowing Match at Ottawa on October 16, 17, and 18. Farmers of Eastern Canada will do well to make it a special point to examine these carefully.

**To the Farmers
Particularly of
Ontario and Quebec**

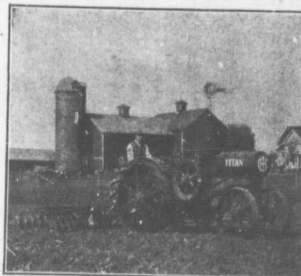
This is a kindly invitation to attend what we believe will be the greatest Tractor Demonstration and Plowing Match ever held in America. With the farm help problem facing us as never before, we specially desire as many farmers as possible to be with us and

**Learn What POWER Will Do
on YOUR Farm**

DATES— OCTOBER 16, 17, 18
Wednesday—Farm Machinery Demonstrations
Thursday—Walking and Riding Plow Competitions
Friday—Tractor and Seed Drilling Competitions
PLACE— DOMINION EXPERIMENTAL FARM, Ottawa, Ontario

RATES—
Special rate of fare and one-third. If over 50 miles, buy a single ticket with certificate, and return fare can be secured at Ottawa for one-third fare plus 26c.
Buy your ticket to Ottawa, where car service every 10 minutes will take you to the Farm.
A programme with list of all prizes gladly sent on request.
Red Cross lunch served on grounds.
PLAN NOW TO ATTEND.

**J. LOCKIE WILSON - Managing Director
Parliament Buildings, Toronto, Ontario**



THE I. H. C. TRACTOR.

Know the world over, wherever good farm machinery is used. The I. H. C. line of implements covers every operation in every class of farm work. Our different sizes of machines will show you what they can do at Ottawa, October 16th, 17th, and 18th. INTERNATIONAL HARVESTER CO. OF CANADA, HAMILTON, LIMITED, ONTARIO.



"AVERY 8-16 TRACTOR" PLOWING IN STUBBLE.
Mr. Gordon Plimcombe, of Strathroy, who owns an 8-16 says: "If you have an Avery you have an engine when you want one. It does all the heavy work." Send for catalogue to R. A. LISTER & CO. (CANADA), LTD., TORONTO.



THE NEVER-SLIP.

The Never Slip creeps on a steel track. It will not pack the soil and is so conveniently handy that it can be turned in its own tracks within an eleven-foot circle. Learn more about it when you are at Ottawa. It is the coming type of tractor.

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MONARCH TRACTOR CO., LTD., BRANTFORD, ONTARIO.

Fertilizers for 1918

(Continued from page 6.)

ing an early delivery. Cooperation in ordering may effect the saving of a considerable amount in purchasing and freight rates.

During the last ten years there has been considerable increase in the number of farmers in British Columbia, Quebec, Ontario and the Maritime provinces using fertilizers, but unfortunately but a small percentage of them have any definite knowledge of the profit that may have resulted from their application. There will always be a degree of uncertainty as regards results from fertilizers, chiefly owing to the fact that seasonal conditions cannot be predicted, but with close observation from carefully planned work, a very great knowledge may be gained as to the kind and amount of fertilizer which will prove profitable. A series of adjacent plots on fairly uniform soil, each with a different

amount of combination of fertilizer and sown to the same crop, furnishes the most reliable means of learning the most profitable application, but if time and labor do not permit of the adoption of this plan, it is better to fertilize, and its yield weighed against that of a similar sized strip on the fertilized area. From the results so obtained the profit or loss from the application of the fertilizer may be readily obtained.

A considerable saving may be usually effected by buying fertilizer in greenish-nitrate of soda, sulphate of ammonia, superphosphate, basic slag, etc., than by purchasing ready mixed fertilizers, and this course also furnishes valuable information for future guidance obtainable in no other way.

Information and advice regarding the use of fertilizers will be gladly given as far as may be practicable, by the Division of Chemistry, Central Experimental Farm, Ottawa.

Fertilizing Elements of Manure
Prof. Dan H. Jones, Ontario Agricultural College, Guelph.

IN fresh manure the plant food materials are not in as available condition for growing plants as in well rotted manure. In the storing of manure, however, to get it well rotted considerable losses of plant food occur unless the manure pile is properly packed.

If the quickest returns are not wanted following the application of the manure to the soil, then the manure may be added in the fresh condition. If this is done in warm weather the manure should be plowed in as soon as possible after application. The total plant food materials present in the manure will thus be added to the soil, where they will be prepared by the soil bacteria for use by the growing crops.

The main objections to putting fresh manure on the land are: first, it is

not always convenient to do so; second, weed seeds may be numerous in the fresh manure, and consequently a heavy weed crop may be expected; third, its action is not so rapid as in the case of well rotted manure, but it is active over a longer period.

Where manure is to be stored in piles or pits until it is ripened or until it is convenient to use, then the greatest care is necessary to prevent losses of plant food from the manure. In a pile or pit should be impervious to water so that leachings from the pile will not occur. Second, it is well to have a cover of well rotted manure at the bottom. Third, the manure, as it is piled up should be well compacted or tramped down to prevent excess of air from getting into it. Fourth, it should be kept moist, but not wet. These precautions apply more particularly to horse manure, which is loose and comparatively dry. Unless this is kept well packed and moist, it is a fire fang is certain. This is an oxidation process or fermentation set going by certain species of bacteria in the manure. If cow or pig manure is available it should be mixed with the horse manure in the pile, as these are very wet and compact, and will give a good consistency to the whole mass. Manure so kept will have the minimum of loss and the plant food will be ripened by the various species of bacteria in it, and thus made ready for immediate use by the growing crops when it is added to the soil. The main things to be remembered in storing manure are: first, to prevent leaching; second, to keep it well packed down and moist.

Three Factors that Make Dairying a Success
(Continued from page 3.)

Good Cows to Come Out Even.
Get a cow that will eat a lot of feed and will make the right use of it and there is no reason why we should not run our average production from 3500 to 4500 or 5000 lbs. As I figure it today, you cannot get a cow that will give more than even until you have a cow that will give 6000 and that is long way from the average of Nova Scotia cows. It is possible to get them and that is why we are seeing cows that will give 13,000, 15,000 and 15,000 lbs. and we keep a bull from a cow that gave 13,000 lbs. Breeding from this kind of stock, if we stick at it, we will work up the average eventually, and we should, as creamery men encourage the patrons to buy the best, encourage proper feeding, not extravagant feeding. If we work hard at this we should in a few years have an average of 5000 lbs. for our dairy herds.

When we have done this we will be that much nearer the realization of the goal Mr. MacKay set before us and it will mean a very great thing for the farmers and for the creamery men.

Disinfecting Stables

GREAT care and thoroughness should be exercised in cleaning and disinfecting barns and stable yards in which animals with contagious disease have been kept. Such diseases as glanders, anthrax, rabies and, to a lesser degree, tuberculosis, are highly dangerous to man as well as to other animals, and so laxity should be tolerated in cleaning up premises where these and other communicable diseases have been known to exist.

The expense of a thorough disinfection is not large and the equipment needed is simple. The following is a list of the most efficacious disinfectants: chlorid of lime; bicarboid of fecton; chlorid of lime; carbolic acid; mercuric formalin; carbolic acid; creolin; carbolic acid; compound solution of cresol. A pall and the ordinary spraying pump is usually satisfactory for applying solutions of any of the above.—W. H. Feldman.



Selecting

By M. J. SINCER
A good food is so profitable and expensive, farmer to give of the proper selection for the best season. Not to use a tractor is the only way by which production can be increased there are other things the good from them. Our present situation is not what it was two years ago, although the price of hens will be profitable in fear or five years ago that pullets are so expensive that yearling from farm flock should be a few yearlings to be.

Go over the flock call out the poor layers are usually in the season, and quite a long time all the while. They are usually the white and the poor layers. Handfully and examine which run along and approximate the hen the better is been being a good only a finger's width laying. By examining a month for two or three poor layers can be. The growing stock upon as the chief of winter eggs. Obtain from time to time early those which let should be in lots by the middle of the commencement to by mature so that keep them growing in those pullets which ply make the best of all approaches are in good health combs and with six pelvic bones, if masses these bones. Above all, select birds.—Journal of

Poultry

By J. E. REMEMBER
Buttermilk will be best for laying hens. Try difference it makes. Are your chickens doing well? If so, These parasites are giving warm weather the birds from doer that mites live cracks and joints of the hatching places during making these places the killer or a solution oil and one piece every two weeks and so likely to be had with treatment is good if be sure to have eggs put down the winter. You will get to sell the fruit during the late fall high price.

Rear Pullets or

IN an experiment, Experimental Farm, Spring of 1917 with the sale of the

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Selecting the Layers

By M. A. Gull.

SINCE a good laying hen was never so profitable nor a poor layer so expensive, it behooves every farmer to give due consideration to the proper selection of his layers for next season. Not every farmer is able to use a trap-net, and while this is the only way by which individual production can be determined, nevertheless there are other ways of selecting the good from the poor layers. Our present state of poultry breeding does not warrant keeping hens over two years old for laying purposes, although the time may come when hens will be profitable producers for four or five years. Owing to the fact that pullets are so much better layers than yearlings the bulk of the farm flock should consist of pullets, a few yearlings being kept as breeders.

Go over the flock of hens now and cull out the poor layers. The best layers are usually those moulting late in the season, and some of them take quite a long time to moult laying all the while. The most active hens are usually the best layers. Hens which are excessively fat are usually poor layers. Handle each hen carefully and examine the pelvic bones which run along each side of the body and approximate each other just below the vent. The farther apart these bones the better is the chance of the hen being a good layer. If they are only a finger's width apart she is not laying. By examining the hens once a month for two or three months the poor layers can be culled out.

The growing stock should be looked upon as the chief source of supply of winter eggs. Observe the chickens from time to time and note particularly those which mature early. Pullets should be in good laying condition by the middle of October but they commence to lay when practically mature so that it is necessary to keep them growing rapidly. Usually those pullets which feather most rapidly make the best layers. When all approaches select the ones that are in good health, with bright red combs and with good width between the pelvic bones, for as laying commences these bones get wider apart. Above all, select healthy vigorous birds.—Journal of Agriculture.

Poultry Pointers

By J. E. Bergey.

REMEMBER that sour milk or buttermilk will make excellent feed for both growing chickens or laying hens. Try some and see the difference it makes.

Are your chickens dumplish and not doing well? If so, look out for mites. These parasites are very active during warm weather and will prevent the birds from doing well. Remember that mites live on the roosts, in cracks and joints of the coop or other hiding places during the day. By soaking these places with a liquid kerose killer or a solution of four parts kerose and one part carbolic about once every two weeks, no troubles is likely to be had with them. The same treatment is good in the hen house.

Be sure to have all the infertile eggs put down that you need for the winter. You will then be in a position to sell the fresh eggs you get during the late fall and winter for a high price.

Rear Pullets or Buy Them?

An experiment carried on at the Experimental Farm, Ottawa, in the spring of 1917 with Leghorns showed that the sale of the cockerels paid all

expenses for incubation, brooding and feed for themselves and pullets up until the first of September. When the pullets went into winter quarters on November 1st, they had cost over and above what had been paid for the sale of the cockerels just 2.0 cents each. This experiment showed not only that it paid to sell the cockerels early, but it also demonstrated that pullets could be raised much cheaper than they could be bought in the fall.

Why Force the Mout?

POULTRY keepers, lots of them, still cling to the idea that, if hens can be induced to moult early, they will be greater egg producers the succeeding winter. "However, this is not the fact," says Mr. Barto, of Cornell. "A very careful and thorough experiment to test this question was conducted a few years ago at Cornell University Poultry Experiment Station. The method that is used to produce rapid moulting is to starve the flock for about three weeks by cutting the ration to one-third the usual amount and then rapidly increasing the feed to all the birds can be induced to moult. This causes a rather sudden dropping of the old feathers, but the Cornell Experiment Station found that the hens thus treated produced fewer eggs during the fall and winter and at a greater cost per dozen than did the hens fed normally.

"It is better to feed the fowls an abundance of nutritious food, quite rich in protein and fats, during the moulting season, but not to attempt to force the moult by any patent stimulating foods."

British Poultry Rations

THE feeding of live stock in the British Isles since the war has been a difficult problem than the feeding of the British people. This is particularly the case with poultry, which consumes food that may be also used in the human ration. As a result of the stringent reduction in the allotments of food for poultry the hen population of the British Isles has been reduced very appreciably since the last four years. In order to ensure that this reduction will be largely confined to inferior flocks and to maintain the best strains of poultry in the country, the government differentiates in the allowance made according to the quality of the bird.

All of the flocks in the country, so we understand, have been graded according to quality and utility value. In order to obtain a special ration of four ounces per bird per day, half grain and half mash in dry form, fowl are classified into first grade and second grade breeding stock. To come in the first category fowls must be (a) utility-breeding stock for egg production, or of utility quality; (b) pure bred stock; (c) the health of the flock must be high; (d) for a period of at least two years the stock must have been bred to meet the above requirements; (e) the owner of the flock must undertake, in consideration of receiving preferential treatment, to supply the public with hatching eggs, day old chicks and older stock at a cost no greater than his 1917 charges; (f) selective breeding must have been practised in the flock.

Second grade birds will receive rations only after the requirements of the first grade have been satisfied. A certain proportion of the allotted fowls will be reserved for the preservation of the best utility stock of ducks, turkeys and geese. The ultimate working out of this plan, dictated by war time necessity, will be a remarkable improvement in the quality of the poultry of the United Kingdom.

We had the hardest storm Friday that ever has been here. It blew down trees that were never blown down before.—Greenacres Banner.

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

Save the Seed Corn

THE shortage of seed corn last spring compelled thousands of farmers to use seed obtained by the government in the southern states. Many who have used this seed, now profess to be well pleased with the new varieties. "Why, my corn is 14 feet high all over the field," one man informs us and his satisfaction with southern corn is being voiced by many others. The weather this fall has been favorable to the corn crop and, in spite of drawbacks earlier in the season, southern corn will be seen to advantage. Even at that, however, there will be much softilage in the country, and we believe that, in the long run, farm opinion will favor those varieties for the silt that reach a fair degree of maturity. What are prospects of getting seed of these earlier maturing varieties another year? The conclusion of Mr. P. L. Fancher, the Ontario corn specialist, is not reassuring. In a recent circular to Ontario corn growers, he says:

"Every farmer who has good corn fit for seed should save as much of it as possible. There will not be enough seed corn in Ontario this year to meet the demand, if every ear fit for seed is saved. The demand for Ontario seed will warrant extra care this fall."

Mr. Fancher is probably not overstating the gravity of the situation. There is not more than eighty per cent of the normal acreage of corn planted in the seed producing area of Ontario, and only about twenty-five per cent of this eighty per cent is from Ontario seed; and of the seed produced from Ontario varieties, quite a large amount will be required for seed in the counties where it is grown. In order to insure a plentiful seed supply of these varieties in the southwestern Ontario for next year's crop, the Federal Government has extended its Order-in-Council prohibiting the export of seed corn from these counties to be effective until November 1st, 1918. This will enable corn growers in the seed corn areas to secure a sufficient quantity of good seed for their own use. For the benefit of farmers outside the corn belt and

FARM AND DAIRY

also for their own profit, it is hoped that all corn of suitable varieties, fit for seed, will be preserved for the use of farmers in the ensilage districts next season.

When Exemption Expires

ATTENTION is directed to an announcement of the Military Service Branch published elsewhere in this issue of Farm and Dairy. The Branch requests that all members of Class 1, possessing exemption as farmers, whose exemptions are expiring and who wish to remain exempt, should communicate with the registrars under the Military Service Act of their respective districts, requesting an extension in time of such exemptions. Questionnaires will thereupon be issued to these men by the registrar and they will receive further exemption upon furnishing satisfactory proof that they are contributing sufficiently to the national food supply. The seriousness of the food outlook and the favorable turn of affairs in France, will probably be conducive to leniency in dealing with extension of exemptions to food producers.

The announcement carries an important provision regarding employment for exempted men. Last winter military exemptions required that the men exempted be continuously employed at farm work. This robbed several essential industries, of which the principal was lumbering, of one source of man power on which they had been accustomed to place a large dependence. It is stated that there were thousands of young men only partially employed on their farms during the winter but who could not leave without endangering their exemption. Provision is now made for such cases. Men who wish to take up other employment during the winter may apply to the registrars for permits to engage during the cold months in occupations of national interest, such as lumbering and munition work. The military authorities are to be commended on the wisdom of this provision.

Pure Bred Stock for Britain

THIS continent is about to make its first shipment of pure-bred stock from the New World to the Old. Mr. Geo. Lane, of Alberta, said to be the largest owner of pure-bred horses in the world, has recently started a Percheron stallion and twenty-six Percheron mares from his Alberta ranch on the way to Europe. These animals were purchased by the Hon. Alexander Parker of Warwick, England. Mr. Parker, who was in charge of the purchasing department of the British Government at the outbreak of the war, visited Mr. Lane's ranches in 1914, and the present purchase was a result of his visit. The selection of stock was made for Mr. Parker by Mr. Lane, Prof. Carkyle, who will accompany the shipment to England, and Dr. J. G. Rutherford.

It is this beginning of a similar trade of large proportions in all kinds of pure-bred live stock in Farm and Dairy would not like to be too definite in making a forecast of the future on a single business transaction such as this one. English farmers have not been favorable to the Percheron breed, and if an individual estate owner, such as Mr. Parker, desires to start a stud now, he would have to come to this continent, as breeding stock is not being shipped from France. It is a greater demand for Percherons and a considerable variety may develop. For the same reason there will be a great demand for American Holsteins when they are permitted to freely enter Great Britain. The Holstein stocks of the Old Country are exceedingly limited and not of the highest quality. At the same time, it is well to remember that the British stockmen are still large exporters of pedigree stock, including Clydesdale and Shire horses, Ayrshire cattle, and all the beef breeds, sheep and swine. With such a surplus for export, it would seem that British farms are not yet depleted of their live stock. That there is a great depletion of breeding stock, taking Europe as a whole, we have every reason to believe. The greatest demand for breeding stock after the war, will come from continental Europe, and it is to supply this demand that Canadian farmers will be well advised to carry their breeding stock as near to normal strength as possible.

The World's Food Situation

THERE seems to be a very general impression abroad, both in city and country, that the food crisis is past. Future prodigious efforts in production and stringent conservation are regarded as not now so necessary as in the past few years. This attitude is traceable largely to an unfortunate statement made a few months ago, by Mr. Hoover, to the effect that the food crisis is past, and, further, to the more recent easing up on bacon restrictions on the part of both the Canadian and United States Food Administrations. As a matter of fact, all evidence points to the necessity for even greater effort in agricultural production than in the past few years, if that be possible, and for a more stringent conservation of food, which should be easily possible.

The most disquieting factor, from an allied standpoint, is our lack of a food reserve. There is probably enough food on hand to feed ourselves and the allies until next harvest, and this is what Mr. Hoover meant when he said the crisis was past. But what if crops next year are shorter than this year? The situation is not secure enough to allow us to feel at all easy. In fact, the present outlook is for a decreased acreage in America next year, as many more men will be drafted from the land in both United States and Canada before another crop season opens up. On the whole, too, American crops were good this past year and the average production high. There is nothing in these factors to encourage the idea that the food situation is nicely solved for now and years to come.

Another obligation may devolve on the food producers of this continent. Food Controller Thomson, in an address at Montreal, recently, stated that more people will die in Russia during the coming winter than have died there since the war began—and they will die of starvation. The situation in Bulgaria, which is now a neutral, is not much better. Many will contend that the Russian people are alone responsible for their pitiable condition and that the Bulgarians, as recent active enemies, need cause as even less concern. Such logic would be creditable to "kultur" but as Christians we cannot see these people starve if it is within our power to help them. The world's food situation in all truth is serious enough to demand every form of assistance, legislation and otherwise, that will encourage and aid the farmer in keeping his food production at a maximum.

Canada at the National

THE great event of the show season from a dairyman's standpoint is the National Dairy Show at Columbus, Ohio. The "National" now holds the same relation to the dairy industry that the International at Chicago holds to the other branches of the live stock world. At the latter fair, Canadian breeders of beef cattle, horses and sheep have exhibited continuously and always with marked success, adding fresh laurels each year to Canada's reputation as a live stock country. Our dairy industry, on the other hand, has been represented only twice at the National, once by R. R. Ness with his Ayrshires and another time by R. J. Fleming with his Jerseys.

This year, again, Canada promises to be well represented. In a recent letter to Farm and Dairy, Mr. R. R. Ness tells us that he has just shipped eighteen head of his Ayrshires to Columbus, and that Mr. Gilbert McMillan, of Huntingdon, is shipping his head B. H. Bull & Sons, of Brampton, shipped twenty Jerseys to the National Dairy Show on October 4th. Mr. Bailey, of Oak Park Stock Farm, had planned to take his Holsteins across, but recent developments at home have made it impossible for him to carry out his intentions. This is regrettable as many would like to have seen the Oak Park herd, Lakeview Dutchland Hengerveld, so far as is taken in the Canadian show ring, come into competition with Oak DeKorf Ohio Holsteins, the champion Holstein bull of the United States. Recently we have heard a rumor to the effect that Mr. A. E. Hulet of Norwich, may have some Canadian Holsteins at Columbus. Canadian breeders generally will wish these men all success at the National Dairy Show. The trip is an expensive one under existing conditions and the whole dairy cattle breeding industry of Canada stands to profit by their endeavor.

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Letters to

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Terrible Conditions Confront Belgian Children

SUFFERING is the lot of the children of Belgium. Pale, emaciated, racked with pain and weak from hunger, mere ghosts of the children of pre-war days, roam about the streets of the occupied towns, pleading piteously for bread. In dark, cold cellars little tots seek shelter from the inclement weather and often death kindly intervenes to relieve the famished little ones lying curled up in these miserable shelters, and the one who died for want of food provides a repast—for the rat!

There are no words to paint the horrors impending over the heads of more than a million Belgian children. Like hunted things they avoid the light of public life, so grievous is their anguish; and what they have suffered history never will tell. It may be well that they should be forgotten, for Christianity must feel the reproach of such things being possible in the twentieth century. In Belgium the gift of life has come to be regarded only as a legacy of pain. Yet the children of Belgium cling to life with a passionate love, for they have heard their parents say all will be well, and there will be sufficient food when menace of starvation and disease is omnipresent. Canadians all in pain, and these terrible conditions by contributing promptly and generously to the Belgian Relief Fund. Subscriptions should be sent to the local committee of the Fund or to the Central Committee at 58 St. Peter Street, Montreal, Que.

Letters to the Editor

Dairy Accounting

EDITOR, Farm and Dairy.—Mr. Marsh's letter on "The Value of Farm Manure" in your issue of August 29th, raises a question which I never could understand. Why should the dairy be credited with the alleged value of the manure, which, Mr. Marsh says in a previous issue of your paper, was placed at \$50 per animal? This \$50 would be debited against the crops; the crops cost just that much more and they are in turn charged against the dairy—so it is only a "see-saw" and results in unnecessary bookkeeping, swelling the dairy receipts and correspondingly swelling the cost of crops. This manure could not, as a rule, be sold for anything and has to be got out of the way in any case. It would be just as reasonable to debit the dairy with the cost of hauling it away. It is this unnecessary, complicated bookkeeping which prevents many farmers from keeping books at all.

It is difficult to believe that any government official (presumably an official connected with the Department of Agriculture) ever said that "Farmers would have no trouble in obtaining help if they paid decent wages and gave reasonable hours," as quoted by Mr. Marsh, though I have often heard city people make a very similar remark. Every farmer knows that is quite true—and every farmer—and, I think, every Department of Agriculture official—also knows that if any farmer paid the wages per hour current in his district for skilled labor, he would very soon have his farm either in a mortgage sale or in a tax sale. Wages for skilled labor in this district run from 75c to \$1 per hour—often more—and farm work is getting more and more every year a skilled occupation.

While I am about it, I should like to comment on your editorial on "Company Farming," in which you say that the "Organization of Resources Committee" will be well advised to move cautiously in recommending the wide adoption of company farming by business men in our towns and cities. I say, more power to this committee; let them by all means go ahead. The best thing that could possibly happen to the farming industry would be for every city in Canada to have its quota of business men so in for community farming. It is true they would lose money—probably lots of it—but they would know a whole lot more about the cost of producing food than they do now, and there would be far fewer people expecting, and even insisting upon, milk, potatoes, etc., etc., being sold at, in many cases, less than the cost of production. I think every manufacturing concern employing more than a certain number of men should be obliged by law to operate a farm in proportion to the number of its employees. Prices of farm produce would soon go up.—Chas. E. Hope, Deep Creek Farm, Langley Fort, B.C.

Gravel Roads the Best

EDITOR, Farm and Dairy.—We hear much nowadays from motor leagues and such like regarding the building of concrete roads in rural Ontario. To read the opinions of the people one would be led to believe that Ontario rural roads are about the poorest in North America, and that the township council is the most inefficient public body in the country. In this connection I would like to call attention to an item that appeared in the London Free Press a few days ago:—

"That the roads of Western Ontario are better than those of Michigan is the opinion of County Engineer Charles Talbot after spending his holidays across the border. While away he motored through many sections of Michigan, studying the conditions of the different types of roadbeds. There is nothing in the way of construction that will compare with a properly maintained gravel road, Mr. Talbot thinks. Aside from the fact that the gravel road is cheaper to construct than the concrete, in his opinion, it is far superior for county construction. There is only one condition, and that is the proper maintenance of the gravel system. The roads in Western Ontario are generally kept in first-class condition, he discovered. Mr. Talbot says he is well satisfied with conditions as he finds them here in comparison to other places."

Commenting in turn on this item our own local paper, the Forest Free Press, published the following piece of common sense:

"Motorists from Michigan and other States, who are in the Forest every day on their way through Ontario, frequently say that the roads in this section are the best they travel over. This is due, principally, to the excellent public service rendered by our township councils. No body of public men anywhere spend the people's money as judiciously, as economically and as profitably as does the average township council. If our higher bodies of public trustees exercised the same care in the expenditure of public funds our national and provincial balance sheets would make a far better showing. There is no form of taxation so beneficial to municipal taxation, so strange to say, it is the people make the most complaints about."

To all this I say, Hear, Hear! We farmers must fight every effort made to centralize taxation and spending power in the government at Toronto. The nearer home the tax is handled the less graft there will be. Taxes are increasing at an awful rate and due largely to extra burdens imposed on us by outside authority. We must put an end to H.—C. L. B., Lambton Co., Ont.

The Newest Way.

"How's politics?"

"Looking up." Three gentlemen candidates are doing my reaping for me and a couple of local candidates are helping mother put up preserves."—Kansas City Journal.

Dividend Announcement

WAR conditions, with the added strain imposed on the funds of Life Insurance Companies through increased death claims, depreciation in the value of investment securities, etc., have set many policyholders wondering what the effect may be on the dividends payable under their policies.

It is with much gratification that the Directors of this Company inform the policyholders that the financial strength of the Company is such that, after making due provision for the added responsibilities arising out of the war, dividends may still be safely paid to policyholders on the same liberal scale as heretofore. It will, therefore, be a welcome announcement to the policyholders of the Company that, during the coming year, they will receive dividends on the same basis as in the past.

The Mutual Life Assurance Company of Canada
Waterloo, Ontario

549

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WHERE there is no hop, there is no endeavor.

The Blue Checkered Apron

DOROTHY DONNEL CALHOUN.—The Farmer's Wife.

"W^HOOLA, Dolly, who-ol!"

Pa gave the reins a reminding twitch and the old horse ambled to an obedient standstill in front of the barn door. The necessity of "who-ling" Dolly had departed with a remote frisky collihood. Pa still said it, indeed he did not know that the "colt" had long ago grown to be an old horse with graying hair and scanty mane.

As he clamored stiffly out over the edge of the pung into the snowy yard, the mild flurry of excitement in his heart contradicted the twinges in his legs and the protesting creaks in his old joints in the cold. In the midst of his unharnessing in the hay-wagon gloom of the barn his fingers often sought the corner of the stiff white envelope protruding from his great-ot pocket as if warming themselves on it.

"Land alivin', Dolly," chuckled Pa softly into the good friendly ear nearest him, "ain't we brought home a surprise to Ma, you'n me? To think we drove down town after a pound o' coffee and a yeast cake and come back with this!"

Jubilantly Pa's lips puckered into whistling trim. The shrill cracked joyousness of "Marching through Georgia" trailed happily across the snowy duck of the yard to Ma who was watching in the kitchen window. Pa always marched through Georgia when something pleased him.

In the wake of the sound came Pa himself, shuffling the snow from his boots in cheerful stamp upon the floor of the porch. A warm whiff of good oven-odors hurried to meet him at the door—a hint of mince pies, a promise of chicken stew—and with them Ma, wiping her hands on her blue gingham apron in a plump little whirl of curiosity.

"Something's happened—you needn't tell me, Peter Potts!" she clamored, mildly insistent. "I guess I know the happening sound o' that waddle after he's married to it goin' on forty years."

Pa lingered pleasurably on the ragged edge of his news, making a great task of struffing out of his overcoat and knitted muffler. "I see Miss Piper in the post office," he remarked gulfily. "She wanted I should tell you there was goin' to be a meetin' of the Ladies Aid to her house come Thursday and to be here to get down to it. The minister was shovelling off the front piazza of the parsonage when I drove by. The Carney young ones and Lou Tibbitt's has cleared off part of the duck pond, the common, an'—"

"Peter Potts!" Ma's tone held gentle exasperation. She reached up on tiptoe and cut off Pa's flow of news with a firm hand. "Now tell me."

Pa's fingers, fumbling obediently in the cavern of his overcoat pocket, emerged with the square white envelope. Solemnly he held it out to Ma. Solemnly her water-reddened fingers came to meet it.

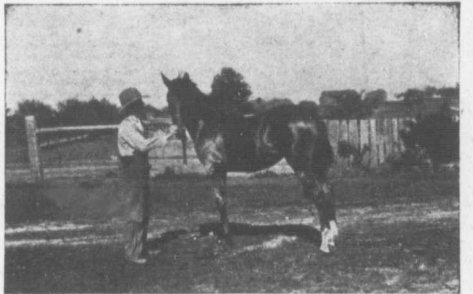
"It—it isn't? Pa, I'm afraid to look!"

"Good news don't bite, Ma."

Across the odoriferous kitchen the fussy hissing of the teakettle and the saucapan lids hobbling over the fire shored the friendly little silences with the drip, drip of the melting snow on the eaves outside. Suddenly Ma's hands shook her apron strings, untying them jerkily.

"I've been wearing a blue-checked apron for forty years," she said slowly. "Now I guess it's high time I took it off."

She smoothed out the strings with



A Little Beauty and His Owner's Joy.

—Photo by E. McConnell, Norfolk Co., Ont.

absent care and folded them primly, ceremoniously. At the same time she seemed to have unteed the forty years of wearing it.

Suddenly she drew a long breath. "I'm goin' to wear my second-best alpaca every day from now on," she cried radiantly, "and I'll get me a new bunnit for meeting. Pa! Pa! I feel if I could be a better Methodist in a velvet bunnit with a bunch o' pink roses on." She laughed up at Pa in trembling excitement. "We said when I got to ten thousand we'd stop savin' and scrimpin' and start in livin'." We set that as our stent, you remember, Pa?"

Peter Potts nodded, his eyes vague with recollection. It had been a long time since they had gloated together over the first tiny entry in the blue bank book in Ma's hand.

The figure had stilled across its waiting pages by slow stages. It is not easy to wring ten thousand dollars from a rocky little farm and a small carpenter's shop. In the wringing, Pa's back had grown bent and Ma's fingers housework-calloused. But now their stent was finished. Pa nodded solemnly down at Ma.

"We'll retire from business, you'n me, Ma. We've airned the right to a little pleasin' if anybody has, I guess. I've done my last job carpentering—you've baked your last pie—"

"Land!" Ma dropped the precious

letter on the table in a panic of haste and hurried onward with agitated steps, catching up the blue gingham apron as she went. A pleasant unburned smell oozed reassuringly out into the room and the tense anxiety of Ma's face relaxed into relief.

"It doesn't pay to take your mind off the oven, when there's pies in it," sighed Ma self-prophetically. "I hope the maid'll remember that. You needn't laugh, Peter Potts, I guess I c'n call her the maid if I want to. It sounds more folksy-like than plain 'hired girl'."

Pa Potts was not laughing. Instead he stooped down awkwardly over defiant little Ma and in a clumsy unaccustomed fashion kissed her on her cheek. The kiss surprised and embarrassed them both, lingering in the lamp-bright kitchen like a pleasant unfamiliar presence. In New England, a kiss is an event.

"Land sakes, Pa!" breathed Ma in soft amazement.

Forty years ago Peter had kissed her, over the first entry in the little blue bank book. She looked up at him now in queer middle-aged shyness, gently near-sighted, to his head spot and the crook in his shoulders from carpentering. Then hastily she veered from the dangerous edge of sentiment, bustling across the room to the stove with brisk rattling of saucapan lids and pots.

"Mis' Deacon Clark was tellin' Sunday, about a likely girl from round Ragged Hill district that wanted to

apron," sighed Ma later, in the dim primness of the tiny front parlor, where she and Pa were sitting "like folks" in the strange luxury of idleness.

Pa, stiffly erect on the uneasy edge of the hatched sofa beneath the crayney eyes of a grim row of ancestors in black walnut frames, looked up from Fox's Book of Martyrs with obvious relish of the starched splendor of a white shirt bosom chafed his chin unaccustomedly and his humble old shoulders sagged abashed beneath the broadcloth dignity of his "Prince Albert" coat.

"I don't know why 'tis," pondered Pa over his Martyrs, "but a starched bosom always sort o' rasps my mind. Likely I'm not educated up to 'em yet."

"You'll get used to 'em, Pa, gradual," nodded Ma across the marble-topped table.

She crossed to and fro in the red plush rocker, looking down at the ample folds of the second-best alpaca with innocent elation. Being a woman, already Ma was waded to dressing up. The crowd of her Sunday clothes. "I been thinking, Peter," a purplish wisdomfulness of appeal lurked in Ma's voice, "it's real nice, isn't it, that little Joey'll have a chance now to be prodded by his starched bosom."

"Yes, Ma, yes. 'Tis nice."

The rocker totted up its creaking again, with reminiscent pauses between jolts. Over the dish pans in the kitchen a sudden splash of soap broke startlingly into the doxology above the rattling of cups and saucers.

Pa and Ma Potts looked out across the snow-rimmed landscape beyond the parter window, a sudden parent look on their gentle old faces. It at most seemed as though they were watching a sturdy little figure toiling with joyous legs up the white slope of the pasture, dragging a sled behind him.

The names, Pa and Ma, had lately belonged to them only four days; but they fitted so well that they had stayed behind after the foglike being who had thus graced them had walled his last tiny protest against the discomfort of life. Some people are born Pa's and Ma's. The pity of it that they are not always the ones to have children!

Often Ma had found a gingerbread horse or soldier growing under her hands on her moulding board and hidden it in gully haste lest Pa should come in and discover her making it; and across the cobwebbed rafters of the shop, Pa had hidden a clumsy little sled fashioned in his old moments, fearful lest Ma should see.

"Har-r-rk from th' To-o-om," sang Gussie piercingly in the kitchen, "a do-oleful so-und—!" Closely following the hymn came a crash of crockery. The hymn trailed off into apprehensive silence.

"Gussie," wailed Ma, "Gussie, what've you broke?"

"Nothin', Mis' Potts," Gussie's tons were reassured. "Nuthin' but a mention 'cept just a teapot. Don't you fret yourself none, Mis' Potts."

Herocally Ma sat back in the embrace of the red plush rocker, gripping the arms, her lips set firmly in a straight line as one determined to enjoy herself no matter what happens. At that moment Ma, too, would have sympathized with the martyrs. "I was married with that teapot," she sighed, mildly uncomplaining, "but it ain't her fault no more. Liked it if it a been named Gussie I sh'd broke it myself, long ago!"

In the days that followed, Ma tried to get accustomed to her hands. She was not accustomed with them in their inactivity in the kitchen. The appling, darning and baking they had never learned the trick of folding themselves; and now it was too late—sixty is too late to begin to learn idleness.

(Continued next week.)

The Up

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The Upward Look

Thankfulness

Thou crownest the year with Thy goodness.—Ps. 65, 11.

O Lord of heaven and earth and sea, To Thee all praise and glory be, How can we show our love to Thee, Who givest all.

—C. Wordsworth.

I HAVE heard or read somewhere the story of a poor woman who, before partaking of her humble meal of a crust of bread and water, lifted her heart to God in thanksgiving saying, "Lord I thank Thee that I have all this and Christ." That may only be a story, but it illustrates my point, that that woman showed the true spirit of thankfulness, and recognized God as the Giver of all. Do you say she was poor. Nay my friend she was rich; rich with the illimitable riches of Him who created the heavens and the earth, rich with His riches who says, "The silver is mine, and the gold is mine, every beast of the forest is mine, and the cattle upon a thousand hills." That is what the woman was thankful for, she rested on the assurance that "He that spared not His own Son, but delivered him up for us all, how shall he not with Him freely give us all things."

Many of our readers will recall that passage in "The Pilgrim's Progress" where Christiana and her family were being shown by the Interpreter through his house. Conducting them into a room where there were a hen and chickens he "bid them observe awhile. So one of the chickens went to the trough to drink and every time she drank she lifted up her head and her eyes towards heaven. 'See,' said he, 'what this little chick doth and learn of her to acknowledge whence your mercies come by receiving them with looking up.'"

Nothing, we are convinced, of all the Christian graces and attributes is so pleasing in the divine sight as just this gift of thankfulness, the acknowledgment of our Heavenly Father's goodness in all the affairs of life. Too prone are we all to take many of life's best gifts just as "common" mercies to be taken as a matter of course, forgetting to return thanks, and it sometimes takes the chastening hand of the Lord to bring us to a sense of His goodness. How often we have seen that only when sickness has laid its hand upon us have the blessings of health been appreciated, and when through a long night we have tossed restlessly and in pain did we realize the inestimable gift of God in granting us the common blessing of sleep.

What would a blind man not give to behold the beauty of the woods at this Thanksgiving season, to gaze on the flowers and the fruit, the pleasant valleys and the sweet flowing rivers of our land, and these we daily see. I have read that if a man born blind was to be granted the gift of sight used for just one hour, and that on first opening his eyes he should behold the sun in its glory, either at its rising or setting, he would be so transported with joy at the wonder of it that he would not willingly take his eyes from it to behold any of the other beauties of the world. And yet this one and many like blessings we daily enjoy.

Why do you think was David called in the Scripture the "Man after God's own heart." Principally, I believe, on account of his thankfulness. Though he committed some of the most deadly of sins, yet his pains so abound in confession of his sins and unworthiness and thankfulness for God's pardon and mercies, that God Himself accounted him a man after His own heart!

If there are any hearts in the world today that should swell with a song of gratitude and thanksgiving at the time it is those of ours in Canada. While other lands have suffered all

the horrors of war, and more people have died of starvation in Europe than by battle, we have been spared these horrors. The foot of the woman has never trod on our shores and not one man, woman or child in our fair dominion need go hungry. And once again from our shores we can say: "Thou crownest the year with Thy goodness and Thy paths drop fatness. The pastures are clothed with flocks, the valleys also are covered with corn." Let us make this a real season of thanksgiving this year, not only for the material blessings of life, great and wonderful as they are, but for the wonderful riches which include all others prepared for us by the grace of God in Christ Jesus.

God's free mercy streameth Over all the world. And His banner gleameth Everywhere unfurled. Broad and deep and glorious As the heavens above, Shines in might victorious, His eternal love.

"What shall I render unto the Lord for all His benefits towards me? I will take the cup of salvation and call upon the name of the Lord."

—J. H. H.

A Song by the Way

By J. M. Hunter.

HO, comrades, heavenward faring, Along life's narrow way, Let's rest beside the highway And sing a song to-day, And sing of glad thanksgiving, And filled with hope and cheer, For all God's wondrous blessings And kindness to us here.

Oh, let us thank Him, comrades, For sunshine and for rain; He crowns the year with goodness In stores of golden grain. And the dawn of peace is breaking In answer to our prayer, And victory is coming To crown our arms "over there."

Lift up your eyes, my comrades, God's goodness to behold; Behind the clouds there's sunshine, Beyond the grey there's gold. Let's sing of all the mercies He giveth us each day, And as we sing about them The shadows flee away.

Bulbs for Indoor Blooming

SEPTEMBER and early October is the time to pot bulbs for early indoor blooming. Hyacinths, tulips, narcissus and jonquils are best suited for this purpose. A good soil for potting bulbs is composed of one-half part well decomposed turfy loam, the remainder well rotted stable manure, leaf mould and sand. These should be well mixed together.

The size of the pot depends on the size of the bulbs and upon the effects desired. As a general rule, for a six inch hyacinth, a 5-inch pot should be used. For tulips and narcissus a 4-inch pot is large enough, the size increasing with the number of bulbs. In potting place a piece of broken pot or some coarse ashes over the hole in the bottom to secure drainage. Fill the pots half full of soil, set the bulbs so that the tops are at least one inch below the rim, cover them with soil and press it firmly around the bulbs, leaving at least one-half inch space at the top for water. After all have been potted and labeled they should be well watered and placed out of doors, with the pots close together. Nail a board frame around them and cover with six inches of ashes or sand. Leave them there for about six or eight weeks. Then make an examination to see if roots are well developed.

If so, remove the pots to a cold frame, shed, attic, or cool cellar in a temperature from 45 to 50 degrees, and water them well.

ROYAL YEAST advertisement featuring a can of yeast cakes and text: "Has been Canada's favorite yeast for over a quarter of a century. Bread baked with Royal Yeast will keep fresh and moist longer than that made with any other..."

Remember the Public is ever busy. They have a multitude of things to think of besides your particular line, and they are very apt to forget the man who fails to remind them by his advertising.

Knit Socks and Dollars with the Auto Knitter

Profitable employment at home in war or peace time



Socks—no more socks—the Soldiers' call! The hosiery industry is booming and the demand far exceeds the supply. Help us fill it but get away from slow hand knitting. Use the fast, reliable, modern Auto Knitter. We gladly take all the socks you wish to send us and pay you highly profitable prices.

The Auto Knitter is simple and easily learned— and secures a big income for full or spare time work right in your own home and no previous experience is essential. Money you and your family can earn at home besides doing patriotic work.

Auto Knitter Hosiery (Can.) Co., Limited, Dept 3818 607 College St., Toronto.

"Died of Starvation" advertisement featuring a gravestone illustration and text: "Many a Belgian mother could have these words engraved on her child's gravestone—'Died of Starvation'."

Perhaps the child has wasted away with Consumption, or has been twisted into a mockery of happy childhood by Rickets, but starvation is at the root of the tragedy.

What else can be expected for a growing child whose daily ration is the bowl of soup and two pieces of bread provided by the United States loans to the Belgian Government?

The only hope for the destitute children of Belgium is that we who can afford three meals a day will be moved to pity and send help immediately. Even a small contribution will help to take some child, sinking under its load of trouble, over to Holland, where with good milk, nutritious food, medical care and loving treatment, he or she may regain health, strength and the wish to live.

GIVE—give until you feel the pinch! Don't wait until someone asks you personally. THIS is personal!

Make cheques payable and send contributions to

Belgian Relief Fund

(Registered under the War Charities Act)

to your Local Committee, or to

Headquarters: 59 St. Peter St., Montreal.

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From 2,000 Cheese Factory Patrons

for the Fall and Winter months. We sell our butter direct to the trade. No middleman's profits. That is one reason why our price is always the highest. There are others. Make us prove it.

Write for free cans when ready to ship.

Valley Creamery of Ottawa, Limited
319 Sparks St., Ottawa, Ont.

Canada Food Board License No. 7-342



Be Sure of Your Weight

Be certain the goods you buy and sell are correct weight. Mistakes are always possible but accurate weight is assured by

Fairbanks Union Scales

They save their cost every year by eliminating short weights in buying and overweights in selling. They are the most convenient size scales for general light weighing anywhere. They replace the old time spring balance scales condemned by the Canadian Government.

Complete with tin scoop, 10 1/2" x 13 1/2" platform, single brass beams and extra weights. The scoop capacity of Fairbanks Union Scales is 30 pounds with half ounces—the platform, 240 pounds by quarter pounds.

They are strong, compact, simple and guaranteed absolutely accurate.

Write our nearest branch for information and prices of scales for any weighing purpose.

The Canadian Fairbanks-Morse Co.,

Limited.

St. John Quebec Montreal Ottawa Toronto
Hamilton Windsor Winnipeg Calgary
Saskatoon Vancouver Victoria

71

THERE IS ONE BOOK

That we would like to sell in the house of every dairy farmer in Canada. It covers every subject in dairying, from growing the feed—to testing your herd. The price of the book could be saved in two weeks' time from the economical feeding methods outlined in it. "DAIRY FARMING," by Eckles & Warren, tells how to balance the feed—what feeds to buy when prices are high—the cheapest feeds to grow on your own farm—and a score of other subjects. It is a very readable book for the practical farmer. Well bound in linen.

Price is but \$1.50.

Book Dept.

FARM & DAIRY

Peterboro, Ont.

Training the Children

No. 7

A Parable of a Prodigal Father

THE moral of the following "parable" will be readily apparent to all who read it. It simply is, "Make a friend of your child while there is time." Every boy and every girl needs help, guidance and encouragement, and who is so fitted to impart this as the father or mother of a child. He or she who cannot find this help at home, he will find it elsewhere, by ways and from those you know not of. Take him into your confidence in all that concerns his personal welfare. Enter into his joys and be ready with your sympathy and advice in his sorrows. Fortunate indeed is the boy or girl who has in father or mother a real confidant and friend, and safe is he from many of the pitfalls of life. Such is the lesson that the parable of a prodigal father teaches.

A certain man had two sons, and the younger of them said to his father, "Father, give me the portion of thy time, and thy attention and thy companionship, and thy counsel which falleth to me." And he divided unto them his living in that he paid the boy's bills, and sent him to a select preparatory school, and to dancing school, and to college and tried to believe that he was doing his full duty by the boy.

And not many days after, the father gathered all his interests and aspirations and ambitions and took his journey into a far country, into a land of stocks and bonds and securities and other things which do not interest a boy; and there he wasted his precious opportunity of being a chum to his own son. And when he had spent the very best of his life and had gained money but had failed to find acquaintance, there arose a mighty famine in his heart; and he began to be in want of sympathy and real companionship. And he went and joined himself to one of the clubs of the country, and they elected him chairman of House Committee and President of the Club and sent him to Parliament. And he would fain have satisfied himself with the hooks that other men did eat and no man gave unto him any real friendship.

But when he came to himself, he said: "How many men of my acquaintance have boys whom they understand and who understand them, who talk about their boys and seem perfectly happy in the comradeship of their sons, and I perish here with heart hunger? I wish to be a chum to my son and will say unto him, Son, I have sinned against Heaven and in thy sight; I am no more worthy to be called thy father; make me as one of thine acquaintances. And he arose and came to his son. But while he was yet afar off, his son saw him, and was moved with astonishment, and instead of running and falling on his neck, he drew back and was ill at ease. And the father said unto him, "Son, I have sinned against Heaven, and in thy sight; I am no more worthy to be called thy father. Pardon me now and let me be your friend." But the son said, "Not so; I wish it were possible, but it is too late. There was a time when I wanted companionship and counsel and to know things, but you were too busy. I got companionship and I got the information, but I got it in the wrong place, and now, alas, I am wrecked in soul and body, and there is no more heart left in me." The father said, "Son, I had hoped to gain thee much money, and behold a stone. Both thy soul and mine may be lost for my folly. We will go back together to the right road, but the burden of the return shall be mine." And the Son replied, "Even so be it. What has been, can-

not be undone, but mayhap more wrong need not be done."

So the hired servant brought forth the fatted calf and killed it and there was great rejoicing, and the father summoned his friends to the feast saying, "Rejoice with me for behold, my son and I whose souls were dead are alive again. We, who were lost, have found each other and will return again to the real things of life." And it was even so, and in after years the first was worthy of his father, because the son the father was worthy of his son.

COOK'S CORNER

Recipes for Using Glucose

Apple Sauce.

EIGHT apples; six tablespoons white corn syrup (or glucose) one-half teaspoon cinnamon; one-half cup water.

Junlet.

Three cups milk; three-quarters cup corn syrup; one junlet tablet; one teaspoon cold water; one teaspoon vanilla. Heat milk, add corn syrup over hot water, stirring the mixture until it is thick. Add junlet tablet and dissolve in the cold water. Add this with vanilla to the milk, stir the mixture quickly to mix in thoroughly. Pour into dishes. Let it cool in a warm place until firm, then cool it.

Rice Pudding.

One-quarter cup rice, three-quarters cup milk; two teaspoons white corn syrup; one-quarter teaspoon nutmeg; three-quarters cup raisins. Cook the rice in boiling salted water until soft. Pour off water, add milk and other ingredients. Bake in a moderate oven for 40 minutes.

Chocolate Cornstarch Pudding.

Two cups milk; three tablespoons cornstarch; one-quarter teaspoon salt; two teaspoons sugar; two tablespoons corn syrup (white); one square chocolate; one-half teaspoon vanilla.

Wheatless Oatcakes.

Three cups oatmeal; one cup corn flour; one cup barley flour; one teaspoon soda; two teaspoons salt; one-third cup brown sugar; one and one-quarter tablespoons corn syrup; one-quarter cup shortening; one cup water. Mix the sugar, corn syrup, shortening and salt together. Dissolve the soda in the water. Mix the ingredients together in a dough stiff enough to cut.

Potato Drop Cookies.

One cup mashed potatoes; one cup corn syrup; one-third cup shortening; three-quarters cup buckwheat flour; two teaspoons baking powder; one-half teaspoon cinnamon; one-quarter teaspoon cloves; one-half teaspoon nutmeg; one-half cup raisins; one teaspoon grated rice; one cup sugar; one teaspoon lemon juice. Mix the ingredients in the order given and drop the mixture by spoonfuls on a slightly greased tin. Bake the cookies in a moderate oven.

Date Loaf

THREE cups Graham flour; one half-cup sugar; three teaspoons baking powder; one pound dates. Mix sufficient to make a stiff batter.

Graham Gems.

One egg; two tablespoons sugar; one tablespoon shortening; one and one-half cups Graham flour; one cup buttermilk; one teaspoon soda; one teaspoon cream of tartar; one-half cup white flour.

Almost Cakes.

One and one-half cups rolled oats; one table-spoon butter or a substitute; one teaspoon baking powder; one-half cup sugar; one-quarter cup raisins; one egg; two teaspoons almond extract. Combine dry ingredients, add butter substitute, the extract, and last, a well-beaten egg. Shape in teaspoonfuls and place on a buttered pan.

Ease in a very m
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Outmeal
Two-thirds cup r
scanned milk; three
sugar; one-half t
tablespoons melted
half cups flour; one
tablespoons baking
beaten egg. Add s
oats and let stand
sugar, salt and in
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Mix ingredients. Ad
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into well greased
from 25 to 30 minut
hot oven.

Wheatless

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Fruit Cake Without

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One cup brown su
quarter cups salt;
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spoon cinnamon
flour; one cup ry
baking powder. Boil
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cool, add the flour a
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Nut Br

Three cups Graha
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cups milk and water;
nuts (not too fine), o
washed and flourine
four, baking powder,
milk and water, sug
and nuts or raisins.
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Women's Institute

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Place in a very moderate oven 25 to 30 minutes, or until dry and light brown.

Oatmeal Muffins.

Two-thirds cup rolled oats; one cup scalded milk; three level tablespoons sugar; one-half teaspoon salt; two tablespoons melted fat; one and one-half cups flour; one and one-half level tablespoons baking powder; one well beaten egg. Add scalded milk to rolled oats and let stand 30 minutes. Add sugar, salt and melted fat, and the flour sifted with the baking powder. Mix ingredients thoroughly and knead the mixture thoroughly. Drop spoonful into well greased muffin tins and bake from 25 to 30 minutes in a moderately hot oven.

Wheatless Pie Crust.

Two and one-half cups rye flour; two cups corn flour; one level teaspoon baking powder; one level teaspoon salt; three-quarters cup of fat; three-quarters cup of water. Sift flour, salt and baking powder together; cut the fat into the flour mixture. Add water, mixing and handling as little as possible. Chill until ready to roll.

Fruit Cake Without Eggs, Milk or Butter.

One cup brown sugar; one and one-quarter cups wheat, one cup scalded raisins; two ounces citron, cut fine; one-third cup shortening; one-half teaspoon salt; one teaspoon nutmeg; one teaspoon cinnamon; one cup corn flour; one cup rye flour; five teaspoons baking powder. Boil the first eight ingredients for three minutes. When cool, add the flour and baking powder sifted together. Mix well and bake in a loaf pan in a moderate oven for about 45 minutes.

Nut Bread.

Three cups Graham flour; five teaspoons baking powder; one and one-half teaspoons salt; one-quarter cup sugar or corn syrup; one cup chopped nuts (not too fine), or one cup raisins washed and floured. Mix together flour, baking powder and salt; add milk and water, sugar or corn syrup, and nuts or raisins. Mix well and put into greased loaf pan, allow to stand 20 minutes in warm place. Bake in moderate oven 40 to 45 minutes.

Women's Institute Conventions

ONCE more our annual Women's Institute Conventions are close at hand. The Eastern Convention is to be held at Ottawa on October 17-18. The place of the girls in the Institute will be dealt with in a comprehensive way at this convention, as this is a subject which is demanding more and more attention. It is anticipated that an address by Food Controller Thomson will be another feature of the convention. The extension of institute work, the nationalization of institutes, discussions on war work, demonstration lecture work, etc., will also be dealt with. A visit to the Dominion Experimental Farm is anticipated.

The branches of Western Ontario meet in convention at London two weeks later—October 30-31. Some of the subjects to be discussed at this convention are: "What Farm Women are Doing to Help"; "Women and Farm Work"; "My Experience as a Farmerette." It is expected that an address on "The Farmers' Opportunity" will be delivered by Hon. G. S. Henry, Minister of Agriculture. A visit to the Byron Sanitarium, in which many of the institutes of Western Ontario are interested, is promised.

The Central Convention will be held in Toronto during the second or third week of November. The date will be announced later. Plans are being made to have representative reports from a few institutes along patriotic lines as one feature of this convention. Production and conservation, also the care of canning centres, will receive prominence. Educational matters and better health campaigns are included

in the proceedings as well as woman's work on the farm.

Mr. Germ and Dish Pan

PERHAPS never before in the world's history have we heard as much about getting rid of germs around our houses as we do at the present time. There are many appliances such as dustless dust mops, vacuum cleaners, antiseptic sprays, household ammonia, and cleansers for removing dirt, etc., and if we make use of these it would seem that we could be "armed to the teeth" against Mr. Germ. There is still a loophole through which the germ finds entrance into many of our homes, and that is via the dish pan.

While we have been keeping close tab on the sanitary condition of our homes, taking care that the milk and food served is clean, etc., we have to a large measure neglected to make any changes in our method of dishwashing—a task which we perform three times daily, or at least 1,935 times in a year. In a recent issue of the Mothers' Magazine appears some interesting and rather startling statements concerning the dangers of careless dishwashing—and even when we would consider careful dishwashing.

A woman who was impressed by the leading role unclean dishes may

play as germ spreaders, proceeding to make a careful study of dish washing and dish wiping in the home from a bacteriological standpoint. She found that an ordinary dinner plate as it leaves the table in the ordinary household has on it anywhere from 30,000 to 90,000 bacteria, the average being about 60,000. A long series of experiments were carried on to learn how many bacteria were left on these plates after they had been washed. The dishes were washed in water of differing temperatures and rinsed in lukewarm water and then the bacteria were counted under a microscope. The average dinner plate, when washed in lukewarm water and dried without rinsing, was found to have on its surface 250,000 bacteria, or almost five times as many as it had when brought soiled from the dinner table!

This statement may seem amazing and improbable; but a little thought will show that it is logical, and the result what might have been expected. What are the necessities for food. And what does the housewife give to those bacteria when she puts a lot of dinner dishes in lukewarm dish water? Warmth and food!

Thousands of housewives are still washing dishes in water no hotter than they can bear their hands in. It

is not hot enough to kill bacteria; in fact, it encourages them. So they multiply and increase, and the dishes that are taken out of this water have on them five times as many germs as they had when put into it.

This source of danger can be eliminated from the household! by the use of hotter dish water and the careful rinsing of dishes in boiling water.

This investigation, therefore, shows that the hotter the water the fewer the bacteria left alive, and hence the smaller the danger of the spread of disease in the family. The experiment showed that the only way to have sterile dishes is to use boiling dish water and boiling rinsing water. The article concludes with six rules by which one may achieve the maximum of cleanliness in dish washing. They are:

First—Carefully scrape all plates and platters before washing.

Second: Do not allow anyone recovering from any form of contagious disease to handle dishes during washing.

Third: Do not cough or sneeze while working with the dishes.

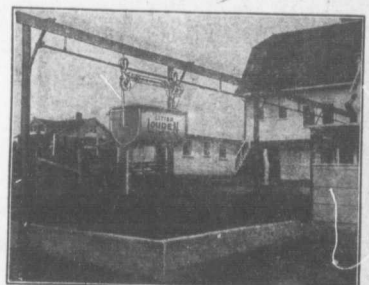
Fourth: Have the dish-water hot. Use a dish-warmer.

Fifth: Rinse all dishes in boiling water.

Sixth: Use clean dish-cloths and dish-towels.

LOUDEN

**LITTER CARRIERS
SAVE ONE-HALF
THE BARN WORK**



Meet your present labor shortage by installing a Louden Litter Carrier. With it you can actually save one-half your barn work—every day in the year—for years to come for it will last as long as the barn stands. Think what that means to you, not only in the saving of hired help, but in the satisfaction of knowing that the Louden Carrier will always be on the job doing its work satisfactorily.

LOUDEN LITTER CARRIERS are built for ease of operation, convenience and long service. The gear is hung on Swivel Jointed Trucks, making it just as easy to run on curved track as on straight. The track wheels are set as far apart as possible to prevent jumping and jerking, and are roller bearing with 7/8" Tempered Steel Axles. You can't overload a Louden Litter Carrier box. It is constructed of heavy Galvanized Steel, reinforced with angle iron—has few parts, and is made for heavy work.

Perfectly balanced—it dumps easily and a slight touch with the fork or shovel, swings it back into latched position.

BUILT TO FIT ANY BARN OR PURSE

We have the outfit that exactly suits your barn. We have the number and kind of stock, etc. and that will pay for itself over and over many times. Write us what size and style of barn. We will be pleased to advise you as to your needs and exact costs of same.

Have you seen **OUR NEW ILLUSTRATED CATALOGUE?** It shows the complete line of Louden Barn Equipment, including Litter and Feed Carriers, Stalls and Stanchions, Hay Tools, Horse, Stable Equipment, Cupolas, Water Bowls, Animal Pens of all kinds—"Everything for the Barn." Sent free on request.

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Produce More Eggs Waste Less Feed

PRATT'S Poultry Regulator will help you get more eggs—more chicks—more layers—more profits. What's more, it will help you to save money on feed, because it makes your fowls digest their feed and turn it into eggs. Poor digestion is a source of waste, and waste reduces your profits.

"Pratts" added to the daily ration, will pay handsome dividends in health, vigor, and egg-production. At your dealer's in popular priced packages, also money-saving 25-lb. pails and 100-lb. bags.

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The Guaranteed Stomach Tonic.

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Pratt's
DISINFECTANT

kills lice and mites.
Keeps down bad
odors. Destroys
disease germs. Use
it for spraying
roosts, nests and
poultry houses.
At your dealer's,
in 1 gal. and 1 qt.
cases.

No business was ever so great or powerful that it could buy all the good advertising space and so get all the good results. There's plenty of chance for every good starter.

NEPONSET ROOFS

NEPONSET PAROID ROOFING NEPONSET TWIN SHINGLES

THRIFT and production are the farmer's watchwords this year. *Paroid* is a tremendous help to the thrifty farmer, because the price is right, it is easy to lay, will require no repairs, and will last for many, many years. To date, Paroid has a record of over 19 years' service.



NEPONSET Paroid ROOFING

If you are roofing, or repairing roofs this year give your building the protection of Paroid. For instance, burning cinders falling on a Paroid roof die out harmlessly.

Paroid makes an attractive roof, too, either in the gray finish, or with the red or green crushed slate surface.

Insist on the genuine Paroid. Look for the label as shown here.

Neponset Twin Shingles for all Residences
Sold by Hardware and Lumber Dealers

Bird & Son, Limited, Head Office, Hamilton, Ont.

—Warehouses:—

Montreal, Toronto, Winnipeg, Calgary, Edmonton, St. John

The Largest Manufacturers of Roofings, Wall Board and Roofing Felts in Canada

pratt's

A Glance at Blouses, Shoes and Gloves for Fall

Farm and Dairy patterns shown in these columns are especially prepared for the most modern features of the paper patterns. When sending your order please be careful to state bust or waist measure for adults, for children, and the number of the pattern desired. Orders are filled within one or 10 days after receipt. Price of all patterns to Our Women Folk, 10 cents each. Address orders to Pattern Dept., Farm and Dairy, Peterboro, Ont.



2587—Tailored waist seems to be gaining in favor this season. The style with high collar turned down in shallow tabs over a black bow tie, now bids fair to carry all before it among the plainer types, although it still has a serious rival in the low necked blouse. The tailored waist is usually seen in lawn, or crepe de chine with small dots or maize as the color. The front is very often tucked after the manner of a man's shirt, and the sleeve, and cuff strictly tailored. For the more dressy waists which are a necessity if one is wearing a suit throughout the fall and winter, half collars or no collars at all are the rule on many of the blouses. Beading, embroidery and fllet or valencienne lace are the favorite trimmings.

In gloves, brown in all its degrees of shade, is good style. Capelin, chambray, suede and silk are v. n. also some kid. We are told, however, that silk gloves are much more practical for wear nowadays as kid is very scarce.

2587—Girl's Dress.—The loose style of dress here shown would make a very practical costume for school wear. If desired one might have a couple of over blouses to wear with the same skirt. Contrasting material will make a suitable trimming for the dress. Four sizes: 8, 10, 12 and 14 years.

2588—A Smart Dress.—The young girl who is looking for a smart style for her new dress, or even the small woman, will not doubt be pleased with this design. The plumed effect in the back is attractive and especially so for slight figures. The front also shows good style as does the sleeves. Three sizes: 16, 18 and 20 years.

2589-2590—Lady's Suit.—Cape coats are very stylish nowadays and probably some of our home dressmakers would like to try out this stunning style. A checked material trimmed with a chic combination. This model calls for two patterns, 10 cents for each. The coat is cut in four sizes: small, 22-24; medium, 26-28; large, 30-32;

extra large, 44-46 inches bust measure, while the skirt is cut in sizes from 22 to 24 inches waist measure.

2584—Girl's Dress.—Is the trendiest and daintiest design for a young girl's frock? It is somewhat out of the ordinary and this should appeal to many of our little folks who are fond of having something different from their chums. Four sizes: 4, 6, 8 and 10 years.

2490—Lady's Apron.—This style of apron has several commendable features. It is practically a complete overall, except for the sleeves, has two convenient pockets, and crosses in the back, fastening on the shoulders, thus doing away with any slipping off the shoulders. For sizes: small, medium, large and extra large.

2584—Girl's Dress.—This little dress is simple of design and yet very attractive in appearance. Note the style of sleeve without a cuff and laid in tucks to fit around the wrist. The sash also adds a soft appearance to the frock. Four sizes: 4, 6, 8, and 10 years.

2586-2590—Lady's Dress.—A dress such as the one shown herewith would make up nicely in some shade of champagne satin, a material which is very popular this season and is more serviceable than taffeta. A trimming of buttons, along with the unique collar and vest effect, should make an attractive costume. This design calls for two patterns, 10 cents for each. The blouse is cut in sizes from 24 to 26 inches bust measure and the skirt from 22 to 24 inches waist measure.

2585—Boy's Suit.—We have not forgotten the boys this week and herewith we are showing a very chic suit for a mother's little man. Four sizes: 4, 6, 8 and 10 years.

2610—Lady's House Dress.—A dress made after this style would be very nice indeed for many occasions and especially for afternoon wear. It is simple and very effective. Seven sizes: 34 to 46 inches bust measure.

The Maker

Butter and Cheese
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Using the B

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Canada Food Bulletin.

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OVES

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.

Using the Buttermilk

PREVIOUS to this year the Silverwood Creamery at London, Ont., has thrown away about 1,500,000 pounds of buttermilk annually. Being unable to find farmers in the vicinity who would accept the milk as a gift, they allowed it to run down the sewer. Mr. Silverwood, President of the concern, has been worried at this waste and this year determined to put a stop to it. Accordingly, he established a pig farm on his own account, securing 28 acres of land three miles from the Creamery.

On this farm, he already has 300 pigs. By combining grains, such as oats, corn and barley, with the buttermilk, and feeding percentage of tankage, he has attained an increase on some of the hogs of 2½ pounds per day. Already this year is self-supporting, although Mr. Silverwood charges it at the rate of 30 cents per hundredweight for the buttermilk used, and by the end of the year he expects to show a considerable gain.—Canada Food Bulletin.

The U.S. Winter Make

THERE can be no question that the make of cheese throughout the New York and neighboring states is running lighter than last year, says the New York Produce Review. This we believe is due chiefly to the keen competition from competing outlets including condensed, powdered and market milk. The demand for all these products is large and it is the general report that it is larger than last year. Hence, even though the milk flow in the east is not materially different from a year ago there appears to be less milk left for manufacture into cheese.

In the cheese producing territory of the middle-west the make of cheese, though lately curtailed somewhat by dry weather, is generally reported to be nearer normal than in the east, and if prices prevailing for cheese are attractive in relation to other dairy outlets, there is no reason yet discernible why we should not have a fairly liberal fall and winter make. Afterfeed, both east and west is good.

The size of the make during the coming six months will be largely a question of prices. So far cheese prices have not advanced sufficiently to offer as attractive profits as can be realized from the sale of milk or the products of some other dairy products; and judging from reports current as to prospective market milk prices for the next three months cheese will have to advance several cents further in order to compete on even terms.

The profit limits on held cheese have tended to prevent cheese prices from moving up as rapidly as would have been the case in an uncontrolled market; but recently, owing to the extent of the demand and lightness of the offerings in relation thereto, prices have been jumping more rapidly and if the present rate of advance holds for a few more weeks we may find inducement sufficient to give as a liberal late fall and early winter make of cheese. It should be remembered that only a very small fraction of the country's total milk supply is used normally for cheesemaking and cheese producing states of very materially increasing states of very much of cheese if the price is attractive enough. As we have said before the latest winter cheese producing power of Wisconsin is very large owing to

the extent to which winter dairying has been developed.

Cream Buying Stations

ALREADY there are over 100 cream buying stations in Western Ontario. They are pretty well distributed over the prairie provinces. Intelligent dairymen who value the reputation of Canadian butter, are beginning to view these buying stations as a menace. In the United States, dairymen have had more experience with the buying station than we on this side of the line and we may well profit by their experience. In the recent issue of "The Dairy Record," Jas. Sorenson of Minnesota, writes of them as follows: "One of the main barriers to cream grading and paying for quality, is the cream station which stands ready at all times to take any kind of cream at the same price, and as the cream station can do little or no business in a community where the standard is of quality is high much effort is usually made by the station operator to keep the quality of cream down to a low level. If the creamery offers a premium for good, sweet cream, we find that the cream station will also pay this higher price for inferior cream, and the cream producer naturally believes that there is nothing to this quality business after all, and

HELP FIGHT YOUR COUNTRY'S BATTLES.

ARE you saving any money for Victory? That's the question that has to be answered one way or the other now. Are you doing anything at all to help fight your country's battles?

Surely it is time to wake up. What counts is the decision to do things. If you start a saving fund of your own, that settles it, you are on the patriotic side. Your efforts count. If not, you might as well be a spendthrift enemy!

Now is the time to act. Either you are a patriot doing your bit by saving your funds, or you are an enemy, disregarding the call of your country and your boys, whose lives are going out at a tremendous rate in Flanders just now.

It is not too late to begin. Save for Victory!

the creamery is again forced to fall back in the old rut of paying one price for all kinds of cream.

"If the cream stations were eliminated, there would be some chance of improving the average quality of our butter, as the patron would then pay some attention to the advice given by the creamery operator, while now it has become a habit with many patrons, to tell the man at the weigh can that they can take their cream to the cream station if it is not good enough for the creamery. How we can hope to improve the output of our creameries under such conditions is beyond our understanding."

Officials of farmers' clubs who are considering the cooperative shipping of live stock will be interested in a recent circular, edited by E. G. Gordon, of the Cooperation and Markets Branch, Department of Agriculture, Toronto, on "How to Organize and Manage Live Stock Shipping Associations." Mr. Gordon is specializing in this line of cooperative work and the suggestions that he makes in circular No. 15 are sure to prove helpful.

City livestock stables appreciate the benefits of a bath occasionally for the hard working horse. Farm teams would also be the better of a bath occasionally.



NOTICE—MILITARY SERVICE ACT, 1917 REGISTRATION OF UNITED STATES CITIZENS

Male citizens of the United States living in Canada of AGES 21-30, both inclusive, MUST REGISTER BY REGISTERED POST with the Registrar under the Military Service Act of the district in which they live, during the TEN DAYS NEXT FOLLOWING SEPTEMBER 28th, 1918; and such CITIZENS OF THE AGES 19, 20 AND 31-44, both inclusive, must so register during the TEN DAYS NEXT FOLLOWING OCTOBER 12th, 1918. It must be emphasized that THIS INCLUDES AMERICANS LIVING IN CANADA OF THE ABOVE AGES, MARRIED AND SINGLE, and includes ALSO ALL THOSE WHO HAVE SECURED DIPLOMATIC EXEMPTION OR HAVE REGISTERED WITH AN AMERICAN CONSUL, or HAVE REGISTERED FOR MILITARY SERVICE IN THE UNITED STATES.

Registration letters may be handed to local Postmasters for despatch to the proper Registrar, under the Military Service Act.

MILITARY SERVICE BRANCH.



NOTICE—MILITARY SERVICE ACT, 1917 MEN EXEMPTED AS FARMERS

Having in view the importance of leaving a sufficient number of men on those farms, which are actually contributing to the National Food Supply, notice is hereby given as follows:

1. ALL MEMBERS OF CLASS I POSSESSING EXEMPTION AS FARMERS which is expiring and WHO WISH TO REMAIN EXEMPT should communicate with the Registrars under the M.S.A., of their respective districts, REQUESTING AN EXTENSION IN TIME OF SUCH EXEMPTION. Questionnaires will thereupon be issued to these men by the Registrar and they will receive further exemption upon furnishing satisfactory proof that they are contributing sufficiently to the National Food Supply.

2. In order to facilitate productive employment during the Winter months, MEN EXEMPTED AS FARMERS SHOULD APPLY TO THE REGISTRARS FOR PERMITS TO ENGAGE FOR THE WINTER IN SOME OCCUPATION OF NATIONAL INTEREST, SUCH AS LUMBERING, MUNITION WORK, ETC. Such permits will serve to enable exempted farmers to pursue other useful occupations for the months during which farming operations cannot be carried on.

MILITARY SERVICE BRANCH.

BRINGING IN THE CASH

One way to do this is to increase your output by better methods of production—another is to conserve the feeding stuffs you now produce, making them go farther by carefully balancing the feeds. Study out the problem now. The one best book of which we know on this subject is "DAIRY FARMING" by Bickley & Warren. You can secure it from our Book Department. The price is but \$1.50, neatly bound in linen.

Book Dept.

FARM and DAIRY

Peterboro



usual amount... this not a... girl's frock... ordinary and... of our little... something... this style of... ofable features... overall ex... production of... back, fasten... doing away... and go extra... Little dress is... very attractive... which is very... in tucks to fit... from... Four... from... green with... of chamois... which is very... more attractive... of the collar and... The blouse is... on 22 to 34 in... do not forget... herewith will... suit... from... dress... and especially... 34 to 46 in...

Success in Wintering Bees

W. W. Webster, Ontario Co., Ont.
GOOD stores in the great essential in wintering bees. Abundance in young bees comes next. They should be in a hive that is not too large so that they may retain the heat. In nuclei or small colonies contract the hive by taking out two combs in an eight-comb hive and insert a division board. The bees will be as snug as "a bug in a rug."

I prefer the sealed cover to the absorbent cover. Years ago I tried the absorbent plan with poor success. Then I tried using paper, at first only partially covering the top of the hive. As my confidence strengthened in the sealed cover, I covered the whole surface. The next and following years I added an extra thickness and still more as if their very life depended upon it. One year as sometimes happens, I forgot to pack one at all and in the spring it was strong and in good condition. This shook my faith in how much depended on the packing. The sealed newspaper cover, however, was on all right. This proved that the sealed cover was doing its work.

Good stores in the great essential. Packing and other things in connection with wintering are of minor importance. Mr. J. L. Bayer in a recent issue of "Gleanings," struck the key note when he said in his title "Cellar or out of doors it makes very little difference provided there is an abundance of good stores." It seems to me there are great possibilities in apiculture at the present time.

A Visit With P. er Smith, of Stratford

(Continued from page 4.)

they have to pay their own way, aside from their breeding value, if they are to retain a place in the herd. Mr. Smith told me that altogether he had 50 head of pure-bred Holsteins with a milking herd of 20 cows. A Stratford milkman comes right to the stable for the milk. His herd sire is a son of old Francis and sired out of a 34.6 lb. bull. I believe he mentioned several other records tack of his herd sire, but I have forgotten them. I remember distinctly, however, that he stated that his springing was selling well through an advertisement in Farm and Dairy.

Crops and Cropping.

From the drive doors of the barn I could look back over the whole farm and see the crops growing in every field. Mr. Smith told me that altogether there were about 60 acres in grain and 25 in new seeding clover. His favorite grain mixture is a bushel each of oats and barley as recommended by Prof. Zarek at Guelph, and his favorite varieties are also Guelph productions—O.A.C. No. 72 oats and 21 barley. Mr. Smith hastened to assure me, too, that he had been successful enough to see several acres to spring wheat. Generally a four-year rotation of crops is followed. Corn, grain seeded down, and then either two crops of hay or hay and pasture. As a practical farmer I have never been able to follow any rule of thumb rotation with exactness, and I find that Mr. Smith is in the same with the best laid schemes. For instance, last winter Mr. Smith had the acres of alfalfa almost completely killed out. From this same field last year he took 27 tons of hay off five acres. "I will not let this one back-set discourage me with the crop," he assured me. "I cropped that same field five years and had great crops every year. Such a freeze out as we had last winter has not occurred before and it may never happen again. I am fully convinced that alfalfa is much harder than red clover." As an expert advocate of alfalfa above all other crops, I was glad to hear my friend make this declaration.

Sources of Income.

This might almost be called a specialized dairy farm. The two sources of income are milk and pure-bred cattle. This year there will be some wheat for sale. "We feed everything we grow on the farm and then buy lots of it," remarked Mr. Smith. "We buy oil cake cottonseed if we can get it, and shorts in preference to bran, as the latter cannot now be relied upon. Does it pay to buy feed? Well, it pays to buy it if it pays to grow it." The home here is such a one as I like to see on the farm, but in its completeness, it is not within the reach of some of us—ourselves, for instance. In the house there is running water, and, as the editor is fond of saying, "all the conveniences that go with it," and a home lighting system. Mr. Smith is almost as enthusiastic about his lighting system as Mr. Hallmark. There are lights all through the house, the stables and in the yards. In addition the electric current supplies the power to small motor, which runs the washing machine, the churn when it is in use, the vacuum cleaner and the electric iron. In the stable a motor runs the fanning mill, and, as I have said before, the cream separator. With

CREAMERYMEN ARE FEARFUL.

CANADIAN creamerymen are fearful of the results of the recent order commanding all the creameries make to November 9. With no direct restraint on the price of dairy butter, creamerymen fear that its price will shoot up to such a level that the creameries such as I have mentioned will not be able to compete for cream, more butter will be made on the farms and the creamery business will suffer accordingly. The only controlling factor is the limitation on the profits of storage butter that will now come on the market.

A further difficulty in Eastern Ontario is the scarcity of 55-pound boxes. These creameries have been turning out print butter very largely; they have no export boxes on hand and they will be hard to obtain.

such a home and such a farm Peter Smith does well to be satisfied with his portion in life. After spending a couple of pleasant hours with him, Mr. Ballantyne and I headed back for Neldpath Farm, where, picking up the rest of the family, we headed for home almost 100 miles away. What a wonderful thing for the farmer is a car!

Breed Days at the National

CANADA will be well represented at the National Dairy Show at Columbus, Ohio, and all Canadians who wish to see the judging should take note of the following dates: Monday, October 14th, is Ayrshire and Brown Swiss day. Tuesday, October 15th, is Jersey day. Wednesday, October 16th, is Guernsey day. Thursday, October 17th, is Holstein day.

Wartime Economy.

Mr. Benson went to New York to business, but lived in Brooklyn. Often he was not able to get home in time for dinner at night. He told his wife that he would phone her every day or to whether he could leave the office or not. Mrs. Benson was of a very thrifty disposition, and the following was her solution of the problem: "Sam, if you find that you can't be home for dinner, phone me at exactly six o'clock. If the telephone rings at that hour, I'll know it is you and that you are not coming for dinner. I won't answer it, and you'll get your neck back."

NOTICE

To Stallion Owners

INSPECTION OF STALLIONS COMMENCES

October 16, 1918

The stallion enrolment report containing route of stallion inspectors has been mailed to owners of enrolled horses. Any owner of stallions who has not received a report should write at once to the secretary.

R. W. WADE, Secretary
 Ontario Stallion Enrolment Board, Parliament Buildings, Toronto.

See About This One

HILLCREST VALE PRINCE

Five Years Old. Weighs 20,000 lbs. 3-4 White

We have twenty-five of his daughters, 10 of them have freshened and are excellent milkers. He is quiet, sure and right in every way; but we must sell him to avoid inbreeding.

His sire is FONTALC HERMES, G. A. Brethen's former herd sire, who has over twenty headed daughters.

His dam is BELLE OF WHITTAKER SADIE VALE, who was one of Mr. Brethen's original foundation cows and who also resorted from his recent 4-year-old in 8 months division; also former champion 4-year-old in H. O. P., 22,786 lbs. milk, 886.36 lbs. butter in one year, and over 20 lbs. butter in 7 days. 88 lbs. milk in one day, sold for \$1.450. Dam of HILLCREST SADIE VALE, sold for \$1,500. Also HILLCREST PONTIAC SADIE, over 28 lbs. butter in 7 days. 88 lbs. milk in one day, sold for \$1.450. Dam of HILLCREST PONTIAC SADIE, over 34 lbs. butter in 7 days, and best right milk 122 lbs., and many others.

HE IS FOR SALE OR EXCHANGE — PRICED DAY.

Write **D. A. McCRAE - Moose Creek, Ont.**

Hillcrest Hengerveld Ormsby

Choice Holstein bull, winner of 3rd prize in class of 16 at Toronto in 1915. He is a son of Hill Crest Ormsby Jocko, the son of a 25,000-lb. cow, whose two daughters sold for \$200, at auction, has a 29-lb. three-year-old steer and is out of a 20-lb. daughter of Sara Jewel Hengerveld's son, whose dam and maternal sister sold for \$5,500, the former being Canada's first 100-lb. cow.

If sold before October 23rd, price \$500.

WM. MANNING & SONS WOODVILLE, ONTARIO

Your Sale Dates

If you are going to hold a sale of pure-bred cattle this season, let Farm and Dairy announce the date for you just as early as possible. We do this very gladly for Breeders, whether you may be one of our advertisers or not. By announcing your dates early, you will avoid having them conflict with others, and indications point towards there being quite a heavy offering of registered stock this year. Select your dates and send them direct to

C. G. McKILLICAN
 Live Stock Representative
FARM and DAIRY PETERBORO

OR SALE

Six first-class, high-grade, Holstein cows and calves in calf. Write for further particulars.

R. J. Tully - Peterboro, Ont.
 R.R. No. 2

BOOKS

Write for our catalogue of farm books. It is sent free on request. Ask for information on any books you require.

BOOK DEPT., FARM AND DAIRY PETERBORO, ONT.

Increase your potato yields by 20%

It has been definitely proven both by scientific experiment and by practical experience that vigorous, disease free seed potatoes grown in Northern Ontario are superior to seed from any other source, for planting in Old Ontario. Here are some results that have been obtained.

The Ontario Agricultural College Reports as Follows:

For five years seed potatoes of one variety from Northern Ontario, New Brunswick and Old Ontario, have been planted side by side under exactly the same conditions. In each year Northern Ontario seed has led, New Brunswick has come second, while Old Ontario seed has given the lowest yields. Last year the yields were 359, 318 and 220 bushels per acre respectively.

The Dominion Central Experimental Farm, Ottawa, Gives as Convincing Evidence:—

In 1917 seed of the Green Mountain variety was secured from New Ontario, New Brunswick and Old Ontario, and planted upon the same soil and cared for identically. The resultant yields per acre were: New Ontario, 360 bushels; New Brunswick, 267 bushels; Old Ontario, 88 bushels.

By Practical Ontario Farmers

the same results have been secured. Several have grown Northern Grown seed potatoes and are unanimous in declaring that their yields were increased thereby not less than 20 per cent. They have proven by practical experience that it pays to buy first class seed potatoes from the North.

There are Definite Reasons for this Increased Yield

The climate in New Ontario is cool and moist, better adapted to the vigorous development of the potato, thus engendering superior vitality in seed tubers. In Old Ontario prolonged heat and drought often arrest growth and weaken the vitality of the potatoes. These latter conditions produce a well matured tuber excellent for table purposes but not of highest quality for seed.

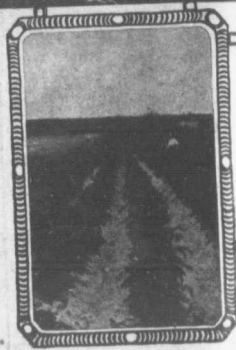
The seed produced in Northern Ontario is immature, the plants remaining green and vigorous until frost cuts them down. It is a well known fact among potato growers that immature seed, other factors being equal, out-yield well matured tubers.

The most serious of potato diseases, Leaf Roll and Mosaic, because of climatic conditions do not make such rapid progress in New Ontario, and when present do not so greatly weaken the vitality of the plants, as they do in Old Ontario. Leaf Roll, the more serious of the two, is seldom found among the native stock in the North. These diseases, on the contrary, have been proven by a survey conducted this year by the Federal Department of Agriculture to be very widely established in Old Ontario, where conditions seem favorable to their development. As both diseases are hereditary, and Leaf Roll, at least, is communicable as well, the only remedy is to secure seed from districts not favorable to their development.

Not all Northern Grown Seed, however, will Give These Greatly Increased Yields

It cannot be expected that seed bought indiscriminately will give the best results. The factors governing the production of first-class seed potatoes hold true in New Ontario as they do in Old Ontario. The foundation stock must be as true to variety and as free from disease as is practicable. Cultural methods must be good, the crop must be inspected and rogued for disease in the growing condition, and the high standard thus obtained must be maintained by careful selection. Where none of these factors are considered it is idle to expect that seed from any source can be purchased with any assurance that the yields will warrant the expenditure involved. As neither Leaf Roll or Mosaic are indicated

Illustration below shows Field Meeting of Seed Potato Growers in Algoma, Called by Agricultural Representatives to Discuss Disease Control and the Production of High Class Seed.



A Rainy River Potato Field Free From Physiological Disease, and True to Variety.

by the appearance of the tubers, it is always the part of wisdom to demand an authentic statement from the seller regarding at least the percentage of these diseases present in the crop.

High Class Northern Ontario Seed Potatoes Now Available

To ensure an adequate supply of seed potatoes reasonably true to variety and free from disease the Ontario Department of Agriculture has encouraged the development of a seed potato industry in Northern Ontario along extensive lines. A quantity of good foundation stock was distributed at cost to Northern farmers who have co-operated with the Department with excellent success. To limit the multiplicity of varieties in Ontario only those of the Irish Cobbler and Green Mountain types were chosen. The Federal Department of Agriculture appointed a staff of Inspectors, who inspected the growing crops this summer for truthness to variety and freedom from disease, and inspected the tubers this fall after being dug. The potatoes which conformed to the standards approved by these Departments for seed are now certified as to quality and are recommended for purchase by Old Ontario growers.

All such recommended seed potatoes are to be sold by Northern farmers in bags, each bag to bear a tag stating the name of the variety, the recommendation of the Federal Department of Agriculture and the name and address of the grower.

Unfortunately the supply of this certified seed, both of the Irish Cobbler and of the Green Mountain types will not, this year, equal the demand. Next year, however, if weather conditions are favorable, the quantity of Northern Ontario grown certified seed potatoes should be adequate for all purposes.

Arrangements have been made by the Ontario Department of Agriculture to put farmers and farmers' associations in Old Ontario in touch with the growers and growers' associations in New Ontario who have inspected and recommended seed potatoes for sale—as long as the supply lasts—car load lots only. Communications will receive attention in the order in which they are received. Exact prices will be quoted upon demand. In order to take advantage of the cheaper lake and rail freight rates, shipments will have to be made before navigation on Lake Superior closes—usually early in November.

Please Note—Orders will be received for Carload Lots Only

Any wishing to avail themselves of this opportunity to buy first class Northern Ontario grown seed are advised to order them at once. For full particulars write the Office of the Commissioner, Ontario Department of Agriculture, Parliament Buildings, Toronto.

Ontario Department of Agriculture

Parliament Bldgs., Toronto

HON. GEO. S. HENRY,
Minister of Agriculture.

DR. G. C. CREELMAN,
Commissioner of Agriculture.



ONTARIO

Use selected Northern Ontario seed potatoes