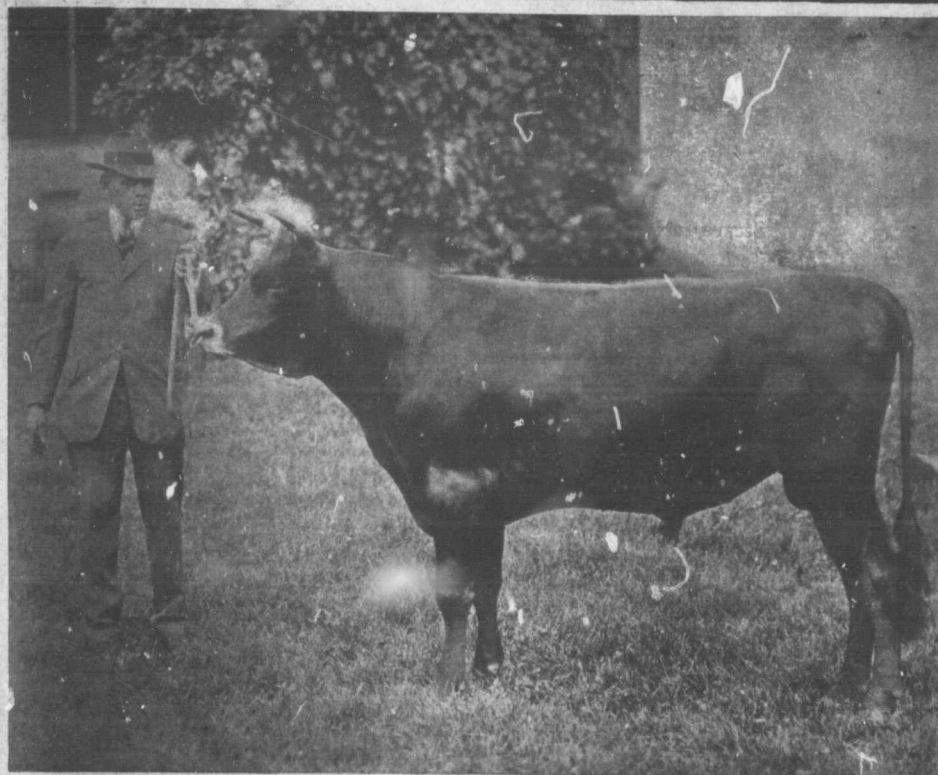


FARM AND DAIRY

The National Dairy Magazine

Toronto, Ont., November

Comm. of Conservation
Asst. Chairman Jan 19



FINANCIAL SENSATION, THE GREAT \$60,000 YEARLING BULL

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Plugging the Leaks

When the Profits Trickle Away. (Page 5.)

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If a human life is lost it cannot be restored. "The place that knew it shall know it no more forever."

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DEC. 6—GUELPH—DEC. 12

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ENTRIES CLOSE NOVEMBER 20th.

J. I. FLATT, President, HAMILTON.
R. W. WADE, Secretary, Parliament Buildings, TORONTO

FARM CHATS

The Coming Power

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

In a former article I referred to the possibility of a horseless farm where the tractor provided all the motive power. Such a proposition will no doubt provoke a smile. I am not young, nor yet very, very old; but I can remember hearing two farmers debating the merits of the mowing machine. One would have none of it. It cut up the sod; and it clipped so close that there was little or no hay crop the coming year. The old scythe was good enough for him. But the mower has come and is now practically universal. Those who remember the first high wheel bicycle (I rode one) and will compare it with the cheap and practical wheel of today, can see what modifications come in an original idea. The first automobile was a little engine under the seat of a buggy. Compare it with the up-to-date car of today. At the late Coughour exhibit of tractors there were as many designs as tractors. Ten years from now it needs no prophet to foretell that three designs will be the limit in the medium size tractor.

Several changes will occur. Among the most important will be an air-cooled engine, that is really cool. The result will probably be accompanied by the cylinders and pistons revolving on a stationary shaft, so cooling themselves and at the same time eliminating the need of a flywheel. This will dispense not only with all the water cooling radiator paraphernalia, but with all the bother of the same. Anyone who knows what a leaky radiator means, or has had his engine freeze up, knows just what this means.

The approved tractor will have its gear and weight as low slung as possible, consistent with road clearance, to lower the centre of gravity and prevent upsetting. A rotating drum as well as a belt pulley drive will be part of the outfit.

In addition, the main axle will be so strong as to sustain the weight of the front half of a trailer wagon on bearing on it instead of on its own removed front axle.

The elimination of the water cooling attachment means a much more compact engine. The absence of a heavy flywheel reduces greatly the weight. With but three main couplings: to the propeller shaft, the gasoline pipe, and the exhaust, and this latter is not essential; it means a power unit very easily removed from the tractor. One of the surprises in store may be a tractor with a detachable power unit. This power unit would be transferable to such implements as the reaper, mower, manure spreader and truck. Instead of pulling these implements, they would be automobile. Except for the steering outfit, very little is needed additional to the present implements.

Probably the first tractor in Nova Scotia was one I made out of an old mowing machine. The result of mounting the engine on the implement, instead of pulling it with the tractor, is to make the implement a purely one man outfit. After all, it seems more rational that such a machine as a reaper should, by its own power, run its own machinery and its cylinders run ahead, than that it should be pulled ahead, and in the effort by frictional resistance speed its machinery.

One thing; such contests or exhibitions as at Cobourg lately while it taught the onlookers' backs, taught the exhibitors much more. They saw their own machines in comparison with their competitors; and they surely must have been blind if they did not profit by their opportunities. Like as iron sharpeneth iron, so com-

petition tends to general advancement.

Letters to the Editor

Against Farm Book-keeping

EDITOR, Farm and Dairy.—We have been taking Farm and Dairy for two years, and find it very interesting and instructive. Occasionally, however, there are letters of advice, which can only be profitable for a few, and are perplexing to a great many. One such letter appeared in your issue of August 10, regarding book-keeping on the farm, and to those who, like myself, are not bookkeepers, neither indeed can be, I would like to give my experience with professional bookkeeping and the system now in vogue now. Some few years ago I had a visit from my youngest brother, who is a professional bookkeeper, and as usual we fell to discussing his pet hobby, and in the course of conversation, said he, "You cannot tell what that field of potatoes will cost you, or whether there will be a profit or a loss from it." He then asked me a few questions about my system of precipitation on machinery, etc., which, of course, I could not answer satisfactorily to his professional mind. "Why," said he, "you don't know where you are at, and you know he actually convinced me that I did not, notwithstanding the fact that we owed no store bills and the payments on our place were regularly met."

Well, the outcome of it was that he opened what he called a nice simple set of books, especially adapted for the farm, and started me on my career of bookkeeping. It lasted only two years. By that time I found out that we were going in the hole a great deal faster than we could make the hole to go in. I spent hours and hours over those books trying to make them balance, but all to no purpose. Some of the pages over which I had gone asleep looked as though a grasshopper had jumped out of the ink bottle and promenade over them. They were utterly useless. I might just as well try to navigate a ship across the Atlantic as to keep those books. Well, I threw them away and the following is our present system:

We keep 15 cows, which produce an average of one pound butter a day each. This we sell at an average of 25 cents a pound, and it gives us an income of \$1.25 per day for each of my two boys and \$2.75 for myself. This gives us our living the same as if we were hired on some other farm. Then we plan to have something else coming in for each month. We raise 12 calves each year, and sell them as three-year-old animals for sale, or one per month. We raise 14 pigs or one per month for sale and two per year for our own use. Our orchard produces an average of 100 bushels of apples a year, which nets us about \$1.50 a barrel. We raise all our own feed, and the three of us do all our own work. Our three-year-old stock bring an average of \$10 and our pigs an average of \$25 each, and our apples \$450 per year, which gives us an income, besides our wages, of a little over \$100 a month. This meets all other expenses and leaves us about \$800 per year ahead, and we don't keep a scratch of a pen in books, and it don't matter a little bit whether our cultivator depreciates 5 cents while cultivating our potatoes or 25 cents while cultivating our corn. When it is worn out we get a new one—Anti-bookkeeper, Annapolis County, N.S.

A Light Lunch

Waiter—"What will you have, sir?"
"Diner—"Oh, bring me an assortment of proteins, fats and hydrocarbons—I have it to you, say 800 calories."—Boston Transcript.

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Marketing of Dairy Products

A Cooperative Experiment that is Succeeding

THE Richmond Farmers' Cooperative Association, of Richmond, Vermont, is an excellent illustration of what dairy farmers can accomplish when they get together cooperatively and decide to have something to say about the marketing of their own products. Previous to the formation of the co-operative association, farmers were selling their milk individually to the Borden Condensed Milk Company at a price fixed by that company. If these farmers had formed an organization and sent a committee to Boston or New York to try to induce another buyer to come into the territory, that buyer would probably have reasoned that the Richmond district was already occupied by one of the strongest concerns in the United States, and that he would be going to a considerable risk in erecting a shipping plant at a cost of \$10,000 or so, and in the end, perhaps, receive a small amount of milk. The Richmond farmers realized this and decided to erect a plant of their own. Stock to the amount of \$10,000 was sold to 50 farmers at a par value of \$20 per share, one share being issued for each five cows. The company was incorporated under the cooperative laws of Vermont, which enabled one person to hold not more than 10 per cent of the capital stock and limit dividends to six per cent. The plant is equipped to ship milk or cream and make butter or cheese.

The Richmond farmers are now in an excellent position to invite competition in the marketing of their produce. They know just how much milk they will have each month in the year. The milk dealer does not have to erect a plant of his own and he can bid for the supply of milk without the additional risk of investing his capital. His bid accordingly goes higher. Buyers, also asked to bid on the butter and fancy cheese which is turned out in the plant.

The plant has not been running long enough to talk at length of its success. Already 40 different buyers from several distant cities have made offers for the output of the plant. Sales are located to the highest bidders wherever they may be located and highest prices are received. A new interest in dairying has been held of the community, and an addition is now being built to the creamery, so that the anticipated business of next summer may be taken care of. Contrast this with the situation that prevailed previous to the formation of the co-operative. When one buyer had a monopoly of the whole territory! The Richmond farmers are well satisfied with their cooperative venture.

O. P. V. Ensilage for the North

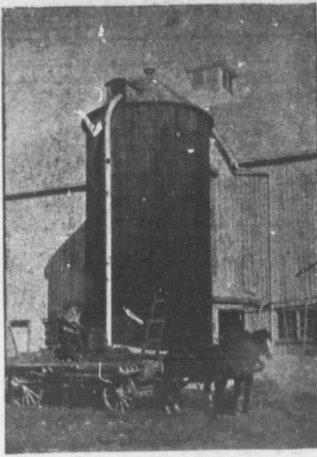
The Mainstay of the Livestock Industry

By C. E. McDowell.

AT this time it is likely that nearly all the various materials grown for the silo have been cut up and put in the silo for winter feeding. From reports, I would judge that the silos, as a rule, are filled to overflowing. This is especially true where corn was grown for ensilage. However, cases where corn was grown for ensilage, we must keep in mind that corn is used to a very much greater extent for this purpose than any other fodder crop.

When passing through the western prairie provinces, the clay belt of Northern Ontario, and the northern sections of old Ontario, the thought of what the people in those districts could use for ensilage where the climate is not suitable for successful production, constantly came to my mind. These sections of the middle districts have a very interesting story to relate to those of the milder corn-growing sections. If they are compelled to depend entirely upon the production of corn to furnish succulent and abundant feed for their live stock in winter, an amount that the stock industry is bound to build up slowly. They are under a tremendous disadvantage compared to their neighbors living in sections where corn can be grown. Surely there is some way of overcoming this disadvantage. There are many substitutes for corn. Some give fair results, some poor. They have been tried in all our districts. Corn has been tried everywhere from our northern boundaries to the far north. We know it is a failure in the colder districts. As I rode along and observed the attempts at growing corn where corn never was intended to be grown, I thought of what a boon some good substitute would be to this district.

To my mind there is only one good substitute so far known. That is a mixture of oats, peas and vetch. I observed this mixture growing two years in succession in a northern district of New Ontario. Moreover, these two seasons were very unfavorable for the production of any crop. If this mixture can be grown successfully as far north as Cochrane, surely it can be grown almost anywhere. These experiments under actual field conditions and on a large scale, have convinced me that a mixture of



Filling the Silo at Monteth.

This 100-ton silo is being filled with O. P. V. mixture. It is the fourth time the silo at the Manitoba Experimental Station, New Ontario, has been filled with O. P. V. ensilage, and results of past years show that this silage mixture will be the mainstay of the live stock industry in the north.

oats, peas and vetch is an excellent substitute for the cold sections where corn cannot be grown successfully. Moreover, I am not so sure but that in many cases, it would give better results than corn, even in the counties where corn is grown.

It is true that corn makes excellent silage and where handled well gives heavy yields. I do not want to give the impression that I am running down corn and boosting O. P. V. mixture. What I do want to impart is an idea of the value of this mixture for northern sections. I have seen corn growing in the Winnipeg district. True, some fields were very good, but alas, more were not. On the best, the grain on the cob was very small. In the northern districts of old Ontario and found that excepting on an odd field, it was poor. I feel quite safe in saying that had the same fields been sown to O. P. V., the results would have warranted the venture. The quality of silage would have been better and the quantity would have far exceeded the other.

Every producer of corn knows that it takes a great deal of labor. The soil has to be rich and in good condition if a heavy yield is expected. It is hard to handle at harvest time. This is not so much the case with O. P. V. There is no after cultivation or hoeing. The land does not need to be any richer, or better cultivated than does land for corn. At harvest time it is not so hard to handle. It is cut with the grain binder and tied into small sheaves.

For the last three years the Ontario Government's farm at Monteth, New Ontario, has been sowing this mixture with splendid results. In that district, it is impossible to grow corn. As the clay belt is better suited for stock raising than any other line of farming, the desire arose to substitute some fodder crop for corn in order that the stock industry might be assured of success. Although clovers grow luxuriantly, they are not considered a suitable substitute for corn ensilage. Consequently in 1915 a start was made in producing a mixture of O. P. V. for the silo. Since then this mixture has been produced with good results each year.

As stated before, the land for O. P. V. need not be richer or better worked than for corn. At Monteth each year the land is plowed in the fall. One year it was plowed in the fall, the manure being spread in the spring and worked in. Spring cultivation consisted of disking and harrowing the land until it was in good tilth, and seeded in the ordinary manner with the grain drill. The seeding dates each year varied considerably. In 1917 this crop was not sown until June 6, while the year previous it was sown about May 10th. Last spring it was about May 20th. The difference in the time of seeding, however, did not seem to affect the quality or yield to any extent.

In 1917 the farm management endeavored to select strong growing oats and peas, suitable to that climate. One-half of the field was seeded with O. A. No. 72 oats, the other half seeded with Angus peas. The field was cut and common vetch were used

over the entire field. The mixture that was used was made up of two and one-half bushels of oats, three-quarters of a bushel of peas and one-half bushel of common vetch. These grains were mixed together and sown with the grain drill at the rate of three and one-half bushels per acre. The season was bad, but the grain germinated very well and produced a fairly even stand.

The crop was cut when the oats were in the firm dough stage. At that time the peas and vetch were in a fair state of maturity. It was cut with the grain binder and tied into small sheaves. Then ready to put into the silo the sheaves were piled on the ground, loaded on to the wagons and taken to the silo. Special care was taken to cut it fine and get it well tramped into the silo. The previous year some difficulty was experienced in getting the crop directly to the fact that the silo was a rough stave silo, and very open at all the joints. Last winter this trouble was not experienced as the ensilage went into a good silo.

I cannot say that cattle like O. P. V. silage any better than they do corn, but I can say that they like it as well. The advantage in feeding value compared with corn is in favor of the O. P. V. mixture. According to analysis, O. P. V. contains a little more protein matter than corn, while the food elements balance each other fairly closely. The yield of green matter for the past three years at Monteth, averaged about 10 tons per acre. How many growers of corn, even in the corn sections, get much more than 10 tons per acre? It is true that many get 15 to 20 tons, but in getting it the grower has the extra work of summer cultivation, which is considerable. I am convinced that the O. P. V. mixture is a cheap ensilage feed to be grown in the districts where good rank, well-eared corn cannot be grown. It will do much to solve the problem of the stock raisers of the north.

Tuberculin Test and Milk Yield

Does Testing Reduce the Flow

J. J. Hooper, Kentucky Experiment Station.

A GREAT many dairymen would test their cows for their own information if for no other reason if they were certain it would not materially reduce the milk flow. Some believe it very detrimental. There need be no hesitancy, because experience shows that when the cows are tested under natural conditions the milk flow is not materially affected. When the cow is taken away from her mates, put into a hot, badly ventilated stable and tested, she does usually produce less milk, but it is due to the treatment and not the test.

To determine if the tuberculin test really reduces the milk flow, we tabulated the milk produced by ten cows before and after the test was made on the Kentucky Experiment Station herd last February. The accompanying table shows the results. The ten cows were giving on an average 21.45 lbs. of milk daily (for three days preceding and succeeding the tuberculin test), and on the two days of test they averaged 20.98 lbs. There was an appreciable decrease of 0.24 per cent on the two days that they were tested. No one need have any fear of unfortunate effects from the test.

	February, 10th	11th	12th	13th	14th	15th	16th
Baromet's Countess.....	21.6	24.4	24.1	24.1	26.3	24.5	24.3
Countess Baromet.....	12.7	13.5	14.1	11.4	11.4	12.4	12.4
Baromet's Countess.....	20.2	20.2	20.2	20.2	20.2	20.2	20.2
Belle Holstein.....	19.0	19.7	20.0	20.0	20.0	20.0	20.0
Baromet's Betty.....	19.0	19.0	19.0	19.0	19.0	19.0	19.0
Aggie Hilly Cornucopia.....	13.2	13.2	13.2	13.2	13.2	13.2	13.2
Rosa Cornucopia Aggie.....	20.6	20.6	20.6	20.6	20.6	20.6	20.6
Rosa Old.....	19.5	19.5	19.5	19.5	19.5	19.5	19.5
Emmett's Countess.....	20.3	19.5	19.5	19.5	19.5	19.5	19.5
Baromet's Lady.....	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total lbs. milk.....	220.6	216.0	216.0	216.0	216.0	208.8	207.7
Average lbs. per cow.....	22.06	21.60	21.60	21.60	21.60	20.88	20.77

The test began at noon of February 13, the tuberculin was injected at 5 p.m. and on February 14 the temperatures were taken until 4 p.m.

The average daily milk production for three days preceding and two days succeeding the tuberculin test was 21.45 lbs., and on the two days of the test 20.98 lbs.

Decrease, 47 lbs. or 2.24 per cent.

It is better to have the heavy flow of milk in winter, when prices are higher and help more plentiful. Cows in November and December get on grass just when there is a tendency to a falling-off in the milk flow. The change to fresh pasture stimulates the production of milk and it is like a freshening. Autumn calving is better for the cow and the calf. They receive better care and are not so exposed to extremes of weather. It must be remembered that a cow must not be neglected when dry. That is the building-up period, and she should have plenty of good food and be in a vigorous condition at freshening time.—The Dairy.

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Does It Pay to Underdrain Our Heaviest Clays?

Ontario Observations That Point an Answer—By C. F. Beattie

THERE is one type of clay soil which cannot be underdrained profitably. It is the heavy clay whose particles are extremely fine and held tightly together, forming a very impervious subsoil. I have often felt sorry for farmers who have gone to the expense of the draining this kind of soil, hoping that it would be improved. I have come to the conclusion that it does not pay to drain this "hard pan land." There is a great deal of this kind of land throughout the country. Much of it has been underdrained without results, and no doubt much of it is under consideration for draining. My advice to men who are contemplating draining this kind of soil, is to consider carefully the possibilities of

great crops that were noticeable. This is usually what happens with a wet, undrained soil after drying out. In 1914 considerable tile draining was done on the Government's Experimental Farm at Monteith, New Ontario. A complete system was put in with lateral drains apart emptying into main drains, which were put in the lowest part of the field. All tile was laid at a depth of three feet. This field of about 20 acres was rather flat and of fairly uniform soil texture, so that it made an excellent field for the comparison of drained and undrained soil. In the fall of 1914 a 10 of this field was fall plowed, care being taken to plow fairly deep and to set the furrow pretty well on edge. The spring of 1915 was an unusually early spring for that section of the country. Both the drained and undrained land was worked down and sown at the same time. The crop included red clover, oats, flax, turnips and potatoes; all were sown crosswise over the drained area, with both ends of the field undrained and the centre drained. This afforded a splendid opportunity of seeing the difference between the drained and undrained, if there was any. Careful observations were taken during the summer and fall, but at the time of harvest no difference in any of the crops was noticed.



The Leader of the Recent Record of Performance Test Report. AARIE of Riverside 3rd leads all of the Holstein cows recently competing their test in Record of Performance with a production of 30,261 lbs. of milk and 732 lbs. of fat. He is owned by Berensford and Charlson, Rochon, P. Q.

obtaining sufficient results to make it pay. In the counties of Essex, Perth, Renfrew, Hastings, Peterboro' and in Northern Ontario, I have run across fields systematically underdrained, which so far as I could see, and so far as the owners knew, gave but very little benefit returns than before they were drained. The soil was that hard, impervious clay. A system of shallow ditches and good water furrows would have given better results.

At the present time I have in mind a 20-acre field in the County of Essex that is drained with a complete system. The lines of tile are 50 feet apart and the tile are laid three feet deep. The lateral drains are led to and emptied in a large main drain along the end of the field. This main drain in turn empties into a special outlet in the form of an open ditch. I noticed that the water from the tile had a drop of at least a foot and a half into this outlet. On questioning the owner, he said that only on rare occasions was the mouth of this outlet submerged. In looking over the field carefully, and making preliminary tests here and there, I found that all the laterals had a fair fall to the main drain, also that the main drain had an average fall of two inches per hundred feet throughout its entire length. There was no indication of any of the laterals or any part of the main being stopped up with sediment. I therefore came to the conclusion that the reason this system did not give results was not because it had been improperly laid. This view was made in the spring. Just as it happened, the day I arrived the owner of the field had commenced spring cultivation for a crop of oats. The field had been plowed the fall previous, evidently turning up in a lumpy condition. The winter frosts, however, had pulverized these lumps and the water of the early spring lying on the land, had caused it to run together and harden. Even at this time the land was very wet and in a poor condition for cultivation.

During the month of August I had occasion to again visit this field. Upon examining the oats closely, it was noticeable that they would not give an average yield of over 30 bushels per acre. The farmer evidently had been unable to get this field in good shape for seeding, consequently lessening the prospects for a good crop. The early part of the season had been rather wet in that district and water had lain on parts of this field. Large spots had been practically drowned out, or scalded. By this time the land had become dry and hard. Everywhere

elsewhere in the undrained piece lying next to it. As a result, the undrained section of this field was seeded before the drained. The crop, with the exception of the "O. P. V." mixture was very poor. Water lay on the drained section of the field all summer.

With most clay soils, underdrains are to be highly recommended. In many cases they will pay for themselves in a single year, often in two years. Evidence of this fact can be obtained all over the country. The impervious clay soils will not respond sufficiently to underdraining to return the outlay put on it. The only feasible thing for the owner of this type of land, is to plow in small lands leaving good clean water furrows. He should also put in numerous flat ditches, especially in the low water courses if there be any. The most convenient way to construct these flat ditches is to plow a furrow each way with the walking plow and then to scoop these out with a "V"-shaped ditcher made of plank.

Plugging the Leaks

Where the Profits Trickle Away

By C. W. Armstrong.

THE senior partner of a Toronto commission firm was sorely misled by his associates. Although the firm had not been the active head of the business for several years before his death, things did not seem to run so smoothly once the old man was gone. "It's like this," explained the managing director. "The old man was always going around looking into this and that and plugging the leaks. Now that he is gone the leaks are not plugged and we are beginning to realize just how valuable to the firm were his then unappreciated services."

There are leaks to be plugged in every business. I some-

times think that in the farming business there are more opportunities for leaks than in any other an' that these leaks often assume the proportions of a bung hole—and we are so busy driving the work that we don't see the profits of our work leaking away. There's the leak of poor cows, for instance. I can quote an example that is not at all beyond the mark. "Fuzzy" and "Stub" were grade Jersey cows. They stood in the same stable, received the same care and were both esteemed by their owner—until the owner joined a cow testing association. Then the owner discovered that "Fuzzy" ate food worth \$57.73 and returned a product having a value of \$57.83. In other words, "Fuzzy's" owner had 10 cents for the trouble of milking her about 300 days in the year, to say nothing of all the other work. "Fuzzy," of herself, represented a very considerable leak. "Stub," standing next to "Fuzzy" in the stable, took 10 cents less milk than "Fuzzy," and returned \$108.26 for her feed and care. The feed by the way was just about the same as that given to "Fuzzy." Therefore, the feed and management could not be blamed for "Fuzzy's" poor showing.

On the average dairy farm there are many "Fuzzy's" that cause woeful loss in the year's profits, that with a little care and forethought might easily be avoided. Feeding for profit is an act that some acquire naturally, but all may acquire it by study.

From our own herd we can offer no evidence quite so startling as furnished by "Fuzzy" and "Stub," but the first year that we underdrained our cows we found that the cow we had always considered our best came sixth in the herd in milk production, and when we applied the Babcock test, she had to be rated even lower. Inclusion in the herd of two cows that we had always considered poor producers but their average test was over six per cent, and they came near the top. No dairy farmer can conclude too that there is any other way of plugging dairy leaks than with the scales and the Babcock test.

The cream separator may drip a whole lot of profits through the skim milk spout. Over in the State of Minnesota I read that cow testers there kept check on an average of 120 farm separators per month. The testers found that over one-third of these separators were leaving more than .03 per cent of fat in the skim milk; 52 per cent of imperfect skimmings were found to be the result of too slow turning; 11 per cent of worn disks; five per cent poor foundation and five per cent of wobbling bowls. From our own experience I believe that the worn disk and wobbling bowls were probably both due to poor foundations. In the case of the wobbling bowls in a very few years, just by mounting it on a plank foundation. Our next separator was bolted securely to the cement floor of the milkhouse, the top of the bowl being proved with a spirit level and apparently it is never going to wear out. We plugged a mighty important leak when we put in that concrete foundation and we plugged still another when we bought a bell, which, attached to the crank of the separator, warned us when we were not turning fast enough.

These are just a couple of leaks around the farm. Then there is the depreciation of machinery, due to no shelter and careless oiling. This may amount to \$100 or \$200 a year. The new weeds slip in un-noticed and become serious pests before we pay any attention to them. The Buildings and fences decay rapidly because of the lack of a little timely attention. Blessed is that farm that has a leak plunger will usually be an old man past active work, or perhaps the good wife in the house. We men of younger years like to be engaged in what we are pleased to call the "important" work of the farm. Let us not underestimate the importance of finding the leaks and plugging them.



A Profitable Side-Line on the Dairy Farm. This register is 600 lbs. capacity and is made of heavy iron. It is a nice little income which does not represent a large outlay. Photo by an Editor of Farm and Dairy.

Milk Yield

Flow Station.

most their cows no other record is not material. A little more because expert tested under not materially way from her bed stable and milk production, of the test. really reduces produced by made on the results. February. 21.45 lbs. and succeeding days of test is inappreciable days that the fear of unfer-

14th	12.5	19.8
26.3	21.6	23.4
11.4	12.1	12.7
24.9	19.8	21.7
30.9	31.0	31.1
12.0	10.0	10.1
12.0	10.0	10.1
14.9	15.0	15.1
17.6	18.0	18.1
18.0	18.0	18.1
20.8	20.7	21.0
20.8	20.7	21.0

By 15, the tubercle February 14 the

for three days the tubercula says of the test of milk in winter more plentiful on grass just off in the milk at the first of the cow and the are not so exacted but are removed when dry should be in good condition at

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PATENTED 1918



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The cost of all new materials used in the manufacture of DUPLEX has increased nearly 100 per cent. inside of a very short time you will have to pay \$2.00 for the DUPLEX. The price to-day is \$1.00, but while our present stock lasts we will accept this advertisement the same at \$1.00 Cash. Cut it out and send it with ONLY \$1.00 and we will send you the DUPLEX AUTOMATIC HAIR CUTTER, ready for instant use, postage paid, registered and insured to any address. Send To-day—to-morrow may be too late. AGENTS WANTED.

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We want Leghorns, Barred Rocks, Rhode Island Reds and White Wyandottes. Tell us what you have to offer---Number, Sex, Age, Breed and Price.

Write at Once---Circulation Manager

FARM AND DAIRY - PETERBORO



The Dust Bath

FOLKS of the old generation were more appreciative of the benefits of the dust bath than are the poultry keepers of today. They can remember when every farm woman who had fowls for pin money, saw to it that a dust bath was provided in the poultry house. In this the old folks showed their wisdom. Poultry cleanse themselves of insects and dirt by dusting their feathers and then shaking off the dirt and the pests with the dust. The dust bath is, therefore, to the hen what the wash tub is to the individual, to say nothing of the fact that she gets good exercise in the operation. Everyone who has ever set a hen knows that she comes off the nest regularly to dust, if she has an opportunity. Instinct teaches her that lice are the worst possible enemies of young chicks and in dusting she is taking the best method of getting rid of them.

We have found that sifted ashes, or clean road dust is just about the best thing possible for poultry to wallow in. The dust bath may be bored off in a corner of the poultry house, but preferably it should be where the sun shines directly on it, thus making it an inviting spot for the hens in cold weather.—B. W. A.

Poultry Terms Commonly Used

A MALE bird less than a year old is known as a cockerel. When over a year old it is a cock. A pullet is a female less than a year old, and when over that age it is a hen.

What is known as a yearling hen is one having laid 12 eggs in a year. A sitting of eggs is usually counted at 13, although many poultrymen give 15 eggs.

A broiler is a bird weighing two pounds or less, and which is six to 12 weeks old.

When a chicken weighs between two and three pounds it is called a spring chicken.

A stewing chicken weighs about three pounds, and a roaster four or more pounds.

A capon is a turkey in its first year. A capon is a male bird deprived of its generative organs, for the purpose of improving the weight and delicacy of its carcass.

A poultard is a pullet deprived of the power of producing eggs, with the object of growing larger. Cramming is a system of forcing feed into young fowls, either by hand or machine, so as to put on extra flesh.

By a trio is meant a male and two females.

A breeding pen is usually made up of from six to 14 females and a male. The male chicken is a cock, the male goose a gander, the male duck a drake, the male turkey a tom or gobbler.

The Litter

NO single item is more consistently neglected in many poultry houses than the litter in which the hens are supposed to scratch for a part of their food during the winter. A good material for litter is one that does not pack readily, that does not absorb moisture too readily, and one that is free from dust and mould. Rye straw probably meets these requirements better than any other material. In many cases, however, rye straw demands a ready market from harness makers, and in no case can

it be purchased for use in the poultry house when not grown on the farm. Wheat straw is in second place, being but little inferior to rye straw. Out straw, on the other hand, has a tendency to absorb moisture more readily than either rye or wheat straw and packs more solidly. Out straw has a higher feeding value than any other kind of cereal straw, and for that reason is better fed to the cattle and the wheat straw used in the henhouse. Where nothing else is available, however, out straw is very good.

Hay is occasionally used when there is lots of it on hand. This is never advisable. It packs hard and absorbs moisture readily. If mixed with clover or alfalfa it breaks up quickly and is very dusty and also subject to mould. Sand, which is used by some poultrymen, is too cold for northern climates. A coating of a half an inch of sand on the floor of the poultry house and then six or eight inches of litter on top of it, is just about ideal. The sand will afford a lot of grit and it keeps the droppings from adhering to the floor. A good pea meal is a splendid litter but not generally available.

Long straw makes just as good litter as cut straw, in fact, better. It affords more scratch, and any straw breaks up readily with the hens working over it. As soon as the litter shows the least sign of dampness it should be removed and fresh litter supplied. In well-ventilated, under Canadian conditions, the same litter may be satisfactory for several weeks.

District Dairy Meetings

THE usual district dairy meetings held throughout Eastern Ontario under the auspices of the Eastern Ontario Dairymen's Association, will be held this year from Nov. 19 to Dec. 15th, starting at Eganville, in Renfrew county, on the first date and ending at Cannington, in Ontario county, on the latter date. Practically all the meetings will be held in the evening and a director for the association will be nominated at each meeting. The meetings will be addressed by Mr. G. G. Puhlow, chief dairy instructor for Eastern Ontario, the local district representative of the Ontario Department of Agriculture, and a representative from the Dominion Experimental Farm, Ottawa. The Ontario Department of Agriculture will also present some high class moving pictures, illustrating important phases of the dairy industry. The places where meetings will be held and dates are as follows:

Eganville, Nov. 19; Pakenham, Nov. 20; Leornard, Nov. 21; Vanick Hill, Nov. 22; Iroquois, Nov. 25; Cornwall, Nov. 26; Martintown, Nov. 27; Kempsville, Nov. 28; North Gower, Nov. 29; Newburgh, Dec. 2; Harrowsmith, Dec. 4; Champlain, Dec. 5; Madoc, Dec. 9; Cambellford (2 p.m.) Dec. 10; Lakefield, Dec. 11, and Cannington, Dec. 12.

How the Victory Loan Sustains Canada's Army

NEARLY 600,000 have been engaged in the Canadian Expeditionary Force.

About 425,000 have gone overseas. Canada's 1918 war bill will be \$400,000,000.

Canada's 1917 war bill was \$300,000,000. Canada's war expenditure is now \$33,000,000 a month.

If it exceeds \$1,000,000 a day. The \$420,000,000 subscribed to the 1917 Victory Loan will not do much more than pay this year's war bill. \$500,000,000 is needed through the Victory Loan, even though peace should come tomorrow.

FEEDERS CORNER

Wintering Work Horses

I WANT you to tell me the cheapest possible method of wintering work of hay and lots of straw, silage and roots. The cheapest possible method of wintering your horses is to use the one team constantly throughout the winter and feed this team grain as needed. The balance of the horses may be maintained on a ration composed of one pound of hay, one pound of straw, and one pound of roots or silage per 100 pounds live weight, this amount being divided into two feeds per day. In case it is not profitable or possible to feed this quantity of hay, more straw and silage might be

suggested a ration.—G. M., Huntingdon Co., Que. substituted, but the horses should obtain at least half-pound of hay daily per 100 pounds live weight. In case straw is not bright and palatable, more grain may be needed for these idle horses, the amount varying with the quality of straw, but not exceeding four pounds oats or oats and barley per day. All changes in feed from the present ration to the idle winter ration and from this back to the spring ration must be made gradually. For the team that does light regular work

a ration composed of one pound of hay, half-pound of straw, and half-pound roots or ensilage per 100 pounds live weight, with a grain ration, varying with the quality of the above feeds from six to 10 pounds oats or oats and barley mixed, will be found satisfactory.—E. S. A.

Sell Bairy or Feed It

BARLEY is selling around here at \$1 to \$1.05 for a good feeding grade. Bran is \$35 and shorts \$44 in limited quantities. I can get standard dairy feed at, I suppose, \$65 or thereabouts, deliver-

More Pork and More Profit Heavier, Cheaper Hogs in Less Time

HOW to round your hogs into tip-top shape for an eager market at lowest cost—that is the problem Monarch Hog Feed is solving for farmers every day. Monarch Hog Feed is a properly balanced feed, supplying every requirement for sturdy hogs with stamina, energy, vigor and size; it has exactly the right proportion of protein and fat to finish your hogs in the shortest time.

Monarch Hog Feed

makes more pork and better pork; it shortens the hogs' stay on the farm and reduces cost of production; it gets hogs to market in best condition; in fact it solves the problem of economical feeding in these strenuous times of high-priced feeds—and there's money in good

hogs nowadays. Improper feeding is one of the causes of soft bacon, declares Prof. G. E. Day in Ontario Agricultural College Bulletin No. 225. Monarch Hog Feed used along with the proper amount of roughage means good hard bacon that gets the best prices.

What Monarch Hog Feed is made of

No single feed can equal the properly mixed feed for results as to gain per day and cost of production. The principal ingredients of Monarch Hog Feed are shorts, corn products and digester tankage. This combination is rich in bone and muscle forming ingredients, and also supplies sufficient fat to bring your hogs to market in shortest time and in best condition. Guaranteed analysis of Monarch Hog Feed is 15% protein, 4% fat.

Monarch Dairy Feed

has guaranteed analysis of 20% protein and 4% fat. It is properly mixed combination of Oil Cake Meal and Cotton-seed Meal with the bulky feeds, bran and corn meal. Though very rich, ensuring splendid results, it can be fed alone.

Sampson Feed

This general purpose feed is somewhat similar to Monarch Hog Feed, except that oil cake meal is used instead of digester tankage; it gives results for both cattle and hogs. Guaranteed analysis 10% protein and 4% fat.

Pigs "go for" Monarch just as they are doing in the picture. It is a palatable, easily digested feed. For profitable results it is the most dependable feed—and, remember, you can depend upon getting it, while mill feeds are often unobtainable.

Give it a trial. Order a ton from your dealer and note results. If your dealer does not handle Monarch feeds, send us his name and we will see that you are supplied.

The Campbell Flour Mills Company, Limited

West Toronto

Ontario



Meetings

at dairy meetings Eastern Ontario Association, Nov. 19, at Egauville, is the first date. Practic will be held in rector for the at meetings will be at G. Puhlov, chief Eastern Ontario, representative of ment of Agricultural Farm, O Department of o present some pictures, illustra s of the dairy i where meetings ates are as hi

Pakenham, Nov. 1; Vanhook Hill, Nov. 25; Cornwall, Nov. 27; Kemps Gower, Nov. 28; Farrowville, Dec. 1; Dec. 4; Fosh, Dec. 8; Madoc, Dec. 11; Dec. 14; and Cannington.

Loan Sustains Army

have been seen? dian Expeditions, a gone overseas. bill will be \$400. ar bill was \$500. penditure is now 000 a day. subscribed to the will not do much year's war bill. eded through the n though pass row.

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Red Tip Calks
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STRONG EVEN PULLING
 ON ICY ROADS

The Farmer can afford to risk using a reliable horse through the icy roads when safety is a clean and convenient RED TIP CALKS insure safety to the horse and comfort to the driver.

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6000 choice yearling hens and 200 yearling cock birds in high record. Bred to lay Wyandottes, Rocks, Reds and Leghorns. 1918 Mating List gives full particulars of this stock. Write us your wants to-day!

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WANTED—Persons to grow Mushrooms for us at home; from \$15 per week upwards can be made by using waste space in cellars, empty rooms, root houses, etc. (start now); illustrated booklet sent free. Address Montreal Supply Company, Montreal.

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

ed. The grain dealer is after the barley. Will I sell it? If not, would you suggest a ration for clover? The clover covers some of them in the flush of milk and a ration for two-year-olds. The finishing ration, making barley the basis of both—Inquirer, Waterloo, Co., Ont.

Barley at \$1.40 per bushel, or approximately \$48.65 per ton, is one of the cheapest grains on the market. Allowing \$1.50 per ton for grinding, it is still one of the cheapest meals which can be fed either to grade Shorthorn calves in milk or to finishing steers. At this price the total digestible nutrients would cost considerably less than bran, shorts, or standard dairy feed at prices above quoted. For milking cows barley meal would require considerable addition of protein concentrates. A good meal ration for milking cows might be composed of barley four parts, bran two parts, and linseed oil meal two parts. If the latter is not available, standard dairy feed might be used. For finishing steers a meal ration composed of barley 10 parts and linseed oil meal one part, will be satisfactory. Here, again, if linseed oil meal is not available or cannot be purchased for less than \$70 per ton, standard dairy meal might be substituted.—R. S. A.

Buy Hay or Feed Straw

WE are very short of hay, having only half our usual requirement of clover. Clover hay is selling locally at \$15 to \$16 a ton. There is lots of straw, and hay concentrates at the regular market price, and will have abundance of available in a few weeks. Can I afford to buy hay at this price? Or would it be more profitable to feed straw and concentrate? In what quantities could I feed the straw, and how? The cows are of mixed breeding, producing to 40 lbs. of milk daily.—W. J. P., Peterboro' Co., Ont.

Generally speaking, the average feeder of dairy cows is inclined to feed too much hay, especially at existing prices. However, I believe that every dairy cow that is milking should receive from four to five pounds of good hay, preferably clover or alfalfa, per day, and even at the prices quoted that is good value. In feeding a small quantity of hay I would consider it best to give this as one feed, preferably at night. With hay at the prices quoted I would certainly advise feeding considerable oat straw, if it is clean and bright. Many feeders prefer cutting this straw and mixing it with ensilage, feeding at the rate of five pounds per cow per day. Other equally successful feeders prefer feeding at least half the straw as a separate feed, and fed whole in the manger, the refuse being thrown back for bedding. I believe, however, considering the above price of clover hay, both methods might be advantageously followed.

It must be clearly understood that where straw substitutes a large part of the rich and palatable hay, proportionally more must be fed if the cows are to be maintained in good condition and producing heavily and most profitably.—R. S. A.

New Appointments to O.A.C. Staff

IT was recently announced by the Ontario Department of Agriculture that two new appointments have been made to the staff of the Animal Husbandry Department at the Ontario Agricultural College. Mr. J. P. Sackville, B.S.A., who left a lectureship there some time ago, to take a position on the staff of The Grain Growers' Guide, has been appointed Associate Professor of Animal Husbandry. Mr. R. L. Vining, B.S.A., a returned soldier, has been appointed lecturer in the same department. Before enlisting Mr. Vining was district representative for Wentworth county. He went overseas with a Wentworth county battalion, and was wounded at Passchendaele, being invalided home some time ago.

Mr. H. M. King, B.S.A., who has been on the staff of the Animal Husbandry Department, has resigned to accept a position in British Columbia.

Save Your Wood Ashes

THE experience of many generations of farmers and gardeners has proven the high value of unleached wood-ashes as a fertilizer, especially for clover, alfalfa, corn and vegetables and fruit crops generally. Wood-ashes contain no nitrogen and supply no humus, but as far as mineral plant food is concerned there is probably no more condensed mineral fertilizer on the market that is more effective and more lasting. They furnish potash, lime, phosphoric acid—the very elements taken from the soil by the forest trees; and returned to the soil they will supply, in the very best form and combinations, the mineral plant food required by our crops.

According to analyses made by the Division of Chemistry, Experimental Farms, unleached hardwood ashes, free from sand, etc., will contain between five and six per cent of potash, about two per cent of phosphoric acid, and from 20 to 30 per cent of lime. Before the war Germany supplied all the potash used for fertilising purposes; since that supply has been cut off potash has recently increased in price, so that now it is worth almost ten times what it was in the early part of 1914, and as a consequence it has practically disappeared from commercial fertilizers. The potash in 100 pounds of good quality wood-ashes is now worth from \$1 to \$1.50.

Owing to the scarcity and high price of coal, farmers will be burning more wood this winter than has been customary for many years. We counsel them to save carefully the ashes from their stoves and put them in a dry place protected from the air. Leached ashes contain very little potash, for this element is readily soluble in water.

The soils most benefited by wood-ashes are light sandy and gravelly loams, and mucks and peaty soils. They are also especially valuable for sour soils deficient in lime. The application may range from 500 to 2,000 pounds per acre, preferably broadcasted in the spring on the prepared land before seeding and harrowed in.

Fill the Machine Shed

NOW that you are through with most of the farm implements for this season, pack them away carefully in the machine shed. Rusting of the iron and weathering of the wooden parts of farm machinery, does more harm than constant use. Machinery has advanced in price and should be better cared for. Those who have no machine shed or room in their barns, would do well if they made a rude shed out of poles, covering them with straw.

The seed drill, cultivators, drags, hay machinery, all small tools and other farm equipment not in use, should be carefully oiled, well oiled to the hinges, greased and stored away in the machine shed. Clean and dry the binder canvas, note the broken slats and straps, tie it in a compact bundle and suspend from the rafters by wires. Take the knives out of the binder and mower, oil and hang away under the protection of a beam. All bearings should be oiled with a heavy oil and note taken of all broken parts that need respect and redressed before spring. When through with the plows scrape off the dirt, oil the mold-boards with a heavy oil or a grease of some kind and then pack in the machine shed. Several hours of good time is lost and much inconvenience caused every spring by rusty mold-boards. The machine shed—should not be used as a poultry house.—L. P. B.

Two political candidates were discussing the coming local election. "What did the audience say when you told them you had never paid a dollar for a vote?" queried one. "A few cheered, but the majority seemed to lose interest," returned the other.

Learn How To Increase Dairy Profits

THIS is a Free Booklet showing plans and ideas that have proven successful for the success of dairy farmers.

Every plan practical for the farmer. Every method one that you can use to-day. Write for both books to-day. They also give facts about

Over One Million In Use

VIKING CREAM SEPARATOR

Best separator in the world. Separates cream from milk. Cleanses milk. Increases yield. Saves space. Cleanses milk. Cleanses milk. Cleanses milk.

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Seed Corn now

Save last spring's troubles, Government advice. We have W.C.Y.D. & Wisc. No. 16 No. 1 and No. 2 corn, dried. Prices \$5 per bushel of 73 lbs. 70 lbs. after December 1st.

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150 Acres \$3850 With Pair Horses, 10 Cows and 5 heifers, brood sow, hens, carriage, wagons, harness, mowing machines, plows, harrows, manure spreader, separator, long list farm and dairy tools, good amount crops, hay for winter, 10 cords block wood, etc. 20 miles to village stores, school, churches, post office, mail delivered, 2 miles to L. W. cutting 10 tons hay; machine-worked dark loamy field, improved, spring-watered pasture, 1,000 cords hard wood, 75,000 lumber; fruit; 8-room house, 38-foot barn, silo, tool carriage, horse, low, poultry house, etc. Owner retiring, sacrifices everything, \$2,500. Call cash. See page 18 Stratton's Big Catalogue. See page 14 for 160 acres; 8-room house, horse, tools, for only 1900; copy free.

E. A. STROUT FARM AGENCY, DEPT. 9,
 150 Nassau St., N.Y.

Brantford Kerosene Engines

1/2 to 20 H. P. Stationary, Mounted, Tractors

These engines are the perfected product of years of study and experimentation with Internal Combustion Engines, and are a demonstrated success on thousands of farms throughout Canada. Get one this season and let it replace your hired man. It's a god for work and its running cost is little, as it runs on coal oil or naphtha.

We also manufacture a full line of Gasoline Engines, such as the New Farm Tractors, Pumps, Tanks, Water Saws, Concrete Mixers, etc.

Write for catalogue of any line mailed on request.

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

Ontario's Breeding Stock is Being Sent to Slaughter

Danger of depletion of Ontario's flocks and herds not far off. Stock yards report heavy shipments for slaughter of good breeding stock. Ontario's breeders may miss big world-wide demand for live stock after the war.

Present Position Dangerous

The Canada Food Board draws attention to the several elements of danger and loss to live stock breeders of the present heavy shipments to the stock yards of excellent breeding heifers, ewes and ewe lambs for slaughter which if not checked means that our farmers are parting with one of their great assets for profitable, after-the-war business.

European Live Stock Very Low

Owing to the ravages of war and the interruption to agriculture for over four years the flocks and herds of Europe are at their lowest point for many years. While the production of grain and other food crops may be quickly stimulated, the raising of beef herds in sufficient numbers will be a much slower process.

North American Breeding Stock Wanted

A tremendous opportunity is open to the breeders of this Continent to supply not only breeding stock but slaughter animals, and Ontario farmers should be prepared to participate to the utmost. This great opportunity cannot be fully taken advantage of if the present heavy slaughter of good breeding animals continues.

European Buyers Already Here

A Belgian Commission has already been in this country investigating the possibilities of securing good breeding animals in quantities. Other countries are enquiring and when the war is over these demands will likely become immediate and heavy.

Shipments of Stockers Now Very Low

It is a fact that breeders are not looking sufficiently far ahead in this connection as shown by the fact that shipments of cattle from the yards are away under last year. In two recent weeks such shipments totalled only 1,200 head as against over 4,000 for the same period last year.

The Ontario Breeders' Opportunity

At the present time there are ample supplies of feed stuffs in the country. If you have good breeding stock it should pay you to make an effort to carry them, or, if you feel you cannot do this, try and sell them locally so that supplies are maintained for future benefit.

Good Business to Feed and Breed

It is admittedly a sound policy to manufacture your own finished product and take the resulting profits. That is, turn your feeding stuffs which are raw materials into the more valuable finished article—your live stock—and, incidentally, benefit by the big increase to the fertility of your land.

Dominion Government's Generous Offer

We print in the adjoining column full particulars of the generous "Car Lot Policy" of the Department of Agriculture at Ottawa. This will repay careful reading. When the farmer can get free transportation in car lots for breeding stock and even his own expenses paid while on the buying trip the great desire of the authorities to co-operate at this critical time will be very evident.

Given the facts, the Ontario farmer is never the man to "lock the door after the horse is stolen," and the present live stock situation not only possesses the elements of danger to our prosperity, but would seem to offer good opportunities for profit if prompt action is taken along the lines above indicated.

Ontario Department of Agriculture Parliament Buildings, Toronto

HON. GEO. S. HENRY, Minister of Agriculture

DR. G. C. CREELMAN, Commissioner of Agriculture

Eastern Canada Edition

Effective May 1st, 1918

Dominion of Canada Department of Agriculture Live Stock Branch CAR LOT POLICY

The following revised statement of the Car Lot Policy will become effective May 1st, 1918, and will replace all statements with regard to same previously issued.

Under this policy the Dominion Live Stock Branch will pay reasonable travelling expenses of a farmer residing in Canada or authorized agent of farmers residing in Canada who purchases one or more carloads of breeding stock under conditions as hereinafter set forth:

(1) Assistance under the Policy will be confined to purchases of female breeding stock (cattle, sheep or hogs) made at the Union Stock Yards, Toronto; Point St. Charles Yards, Montreal; or the East End Yards, Montreal.

(2) No assistance under this Policy will be allowed when the stock is purchased for speculative purposes.

(3) A car lot shipment must include not less than twenty head of cattle, forty sheep or forty hogs. In a mixed shipment, two sheep or two hogs will be accepted as equivalent to one head of cattle in fixing the minimum for one car.

(4) Any person desiring to take advantage of the Policy must make formal application to the Representative of the Branch at his nearest Stock Yards and, before commencing to purchase, must receive from him a certificate authorizing assistance under the Policy. This Certificate will indicate the Stock Yards at which the purchase must be made if the benefit of the Policy is allowed. In all cases the Certificate will direct the purchaser to his nearest Stock Yards unless, in the judgment of the Representative of the Branch, the condition of the Market at the time warrants an exception being allowed.

(5) Expenses will be allowed covering Railroad transportation from the home of the purchaser to the Stock Yard at which the purchase is made, also hotel expenses for a reasonable time required to make the purchase.

(6) The purchaser should secure a receipt for his hotel expenses and should attach this receipt to his account. The account should be forwarded in triplicate on forms which will be supplied for the purpose.

(7) The purchaser is further required when forwarding his account to include, on forms supplied by the Branch, a statement regarding the purchase. The Certificate secured from the Representative of the Branch previous to purchasing should also be attached to the account.

(8) Parties purchasing female breeding stock under the terms of the Car Lot Policy and who comply with the terms of the Free Freight Policy of the Branch will be entitled to the benefit of both Policies on one shipment.

(9) If desired by the purchaser, the services of the Representative of the Branch at the market will be available in an advisory capacity. The actual purchasing must be done, however, by the buyer himself or by his authorized agent. Under no circumstances will any responsibility in this connection, be assumed by any officer of the Branch.

The Markets Representatives of the Branch at the different Stock Yards in Eastern Canada are as follows:

W. H. IRVING, 1127 Keele St., Toronto, Ontario.
S. N. CHIPMAN, Live Stock Exchange, Bridge St., Montreal, P.Q.



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CLEANS-DISINFECTS—USED FOR SOFTENING WATER—FOR MAKING HARD AND SOFT SOAP—FULL DIRECTIONS WITH EACH CAN.

Farm and Dairy is in an excellent position to champion the cause of the farmer in Canada, because it is owned and controlled exclusively by farmers.

HORTICULTURE

Cover the Strawberry Bed

UNLESS the strawberry bed is covered, a great many people are likely to find that their plants have received winter injury. The lack of this attention is the cause of nearly 50 per cent of the failures. As soon as the ground freezes cover the plants with coarse straw, coarse manure or something else, to prevent the frost from heaving out the plants, breaking their roots and destroying the crowns. If the new growth in the spring cannot easily work its way up through the mulch it is necessary to remove a part of it. If the mulch is removed early in the spring strawberries will make a much earlier start, hence will produce fruit much earlier. Covering strawberries is a method commercial growers use in checking their plants

from starting too early in the spring. However, it is advisable to leave part of the mulch. It will form a covering beneath the plants and keep the berries from touching the earth, and prevent the rain from splattering them with sand and dirt.—J. B. P.

Fall Garden Work

A. D. Martin, Essex Co., Ont.

ONE of the things which has been most forcibly impressed upon the experienced gardener is the advisability of careful preparation in the fall for the next season's gardening operations. I have found that if the decision to have a garden has not been made until spring, hurried preparations and delayed planting usually result. Of course this is better than no garden at all, but the garden is much surer of being started under favorable conditions if preparations are made for the season's campaign the fall before.

It will be found that a small area highly fertilized, well cultivated and extensively cropped, will give more

satisfactory results than a large area poorly fertilized and only half tilled. It is unwise to undertake a large home garden that can be properly cared for. As a rule the farm garden does not cover an area of over half an acre. It is noticeable that the corn fields receive a fair application of manure while the garden plot is neglected. Garden crops will respond to liberal fertilization as well as field crops. In my opinion 40 tons of good barnyard manure per acre is not too much.

A great many people like to follow the practice of manuring their garden in the fall before plowing. For myself I prefer plowing the plot first and then spreading the manure on the fall plowed land. It becomes more thoroughly incorporated with the soil. With good thorough cultivation in the spring the plowed land and the manure can be thoroughly mixed.

To get large yields of stalks for silage the best must be liberally fertilized. Cleanings from the poultry house is an excellent fertilizer for this purpose. Those growing small plots for their own household need not go to the expense of purchasing commercial fertilizers if they have plenty of manure from the poultry house or stable. Extensive growers use a commercial fertilizer composed of about 300 lbs. of nitrate of soda, 400 lbs. muriate of potash, 700 lb. tankage, and 600 lbs. acid phosphate. This is usually applied at the rate of one ton per acre as a supplement to barnyard manure.

I do not think that it is advisable to keep one plot too long for the home garden and usually change one every three or four years. Garden land needs a rotation as well as any other. It will be wonderfully benefited if seeded down to clover now and then. If the old plot is to be used again all the old vines, potato tops, corn stalks and other rubbish should be picked up and burned. This kind of rubbish is sure to harbor insects and plant diseases of various kinds, which will be carried through the winter if allowed to remain unburned.

Time to Cover Raspberries

RASPERRY canes are not immune from winter injury. A little extra care in covering may make a difference between a full crop and a partial one. Now is the time to cover the bushes before the ground freezes.

If the bushes have not already been thinned out, cut out all but ten or twelve canes. Bend the canes over by taking hold of the middle of the canes with the left hand, and with the right hand grasp the same one close to the ground and bend them slowly over. This will prevent the breaking of the canes, which are very brittle. Begin at one end of the row and bend the canes and cover in one direction.

Pulverize the soil so that there will be no air spaces around the canes. If air-holes are left the canes dry out and are subject to freezing and thawing during the winter and spring, with the result that many canes will die. If the work is well done, four to five inches of soil is sufficient.—J. B. P.

Our Frontispiece

ON the front cover of Farm and Dairy this week appears the likeness of Financial Sensation 153793. A half interest in this young Jersey bull was recently purchased by the Graystone Jersey Farm, Inc., West Chester, Pa., for \$30,000. The half interest retained by the owners of Waterloo Jersey Farm, Waterloo, Iowa, is valued at \$30,000, making Financial Sensation a \$60,000 bull. The half interest sold brought \$5,000 more than has ever been paid for any Jersey bull, and this animal is the second highest priced bull of any breed.



Get Back to Nature

Abandon cares and business worries. The length and breadth of Canada calls you. Bury yourself in the depths of her forests and enjoy the ideal holiday for the care-worn business man

Pack up the kit. Hit the trail to the silent places where big game abounds. And be sure

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is in the old duffle bag. It's the one sure way of making the hunt a success.

Dominion Ammunition is made for use in Canada—tested to every action and to every shooting condition.

Big game hunters find Dominion Metallics the most accurate and dependable for big game. Make your big game trip a success by using Dominion in your rifle.

The big "D" trademark guarantees its dependability.

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Montreal, Canada

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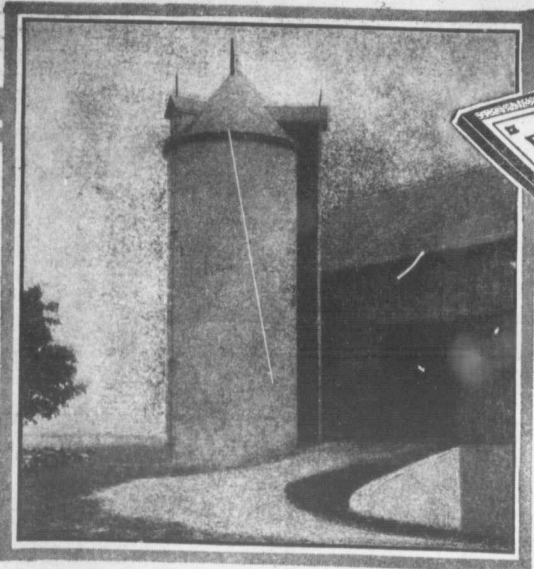
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This book that has helped more than 100,000 farmers to increase the value and the profits of their farms, will help you—by showing you how easy it is to construct improvements that are permanent, fireproof, weather-proof, vermin-proof, repair-proof.

The SILO should be of CONCRETE

It has been said that the ideal silo is the glass fruit jar, because it has smooth, air-tight, water-tight walls with no joints, the walls being non-absorbent and round in shape. These qualities, so necessary for the satisfactory silo, are all found in the silo of concrete.

AIR-TIGHTNESS.—Silage spoils as the result of certain bacterial action due to air getting in. In a concrete silo it is impossible for air to reach the silage through the walls.

WATER-TIGHTNESS.—To prevent silage juices from escaping, is only secondary in importance to preventing water entering from the outside. A concrete silo has no joints for water to come through.

RAT-PROOFNESS.—Rats cannot gnaw through concrete; they cannot make holes, allowing air to enter, which results in silage being spoiled.

PERMANENCE.—Silos built years ago of concrete are in as perfect condition to-day as when new. Concrete grows stronger and tougher with age. There is no outlay for up-keep, no painting, no mortar joints to fill, no holes to patch.

FIRE-PROOFNESS.—Lack of fire-fighting appliances on a farm, makes it especially desirable that so important a farm utility as the silo should be of concrete. There are instances on record where the burning of the silo has not only cost the farmer his silo and contents, but also has made it necessary for him to sell his stock, because of having no other feed to give them.

A permanent silo of concrete is the safest and best investment a farmer can make. It means larger herds, less work, more profits.

We will be glad to send you free of charge our special book about "Concrete Silos." Write us for the names of concrete silo builders in your neighborhood or follow the very complete instructions in the book. We also have a book "What the Farmer Can Do With Concrete," which will help you build anything from a feeding floor to a milk house. Send your name and address—both books will be mailed free.

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CIRCULATION STATEMENT.
The paid subscriptions of Farm and Dairy approximate 20,000. The actual circulation of each issue, including copies of the paper sent to subscribers, who are but slightly in arrears, and sample copies, varies from 10,000 to 20,000 copies. No subscriptions are accepted at less than the full commercial rate.
Specially detailed statements of circulation of the paper, showing its distribution by counties and provinces, will be mailed free of postage.

OUR GUARANTEE.
We guarantee that every advertiser in this issue is reliable. We are able to send you advertising notices of Farm and Dairy are as carefully edited as the reading columns, and because to protect our readers, we turn away all unsuitable advertisers. Should any advertiser herein deal dishonestly with you as one of our paid subscribers, we will refund you the amount of your loss, provided such transaction occurs within one month from date of this issue, that it is reported to us in writing of its contents, and that we find the facts to be as stated. It is a condition of this contract that you will not advertise in any other paper. "I saw your advertisement in Farm and Dairy."
Requests shall not play their trade at the expense of our subscribers, who are our friends, through the medium of these columns; but we shall not attempt to adjust trifling disputes between our honorable business men who advertise, nor pay the debts of honest bankrupts.

The Rural Publishing Company, Ltd.
PETERBORO AND TORONTO

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

The War is Over

THE war is over. How inspiring was the glad announcement. With what joy we delight to repeat it. How it has changed the face of things! With what new hope and confidence do we look forward to the future. Great are the national and international problems that confront us. Yet, none that the ever-present burden of the war has been lifted we are conscious of a new hope and renewed faith in the future. We almost delight in the thought that at last we are free to grapple with them now that the long, dreary years of the war are over.

Amidst all the rejoicing we do well to remember the words of the great British Admiral who, shortly after the outbreak of the war, stated emphatically that the victory would not be won until, as a people, we realized our helplessness and turned to God for aid. Five months ago, as a nation, we had refused to do so. The war was at its most critical stage. The great German drive was under way. Premier Lloyd George has announced recently that the leaders of the allied forces were debating whether or not the best effort to surrender the channel ports or Paris. In our extremity Premier Borden set a Sabbath as a day for national prayer. President Wilson selected a week day for national humility and prayer in the United States. Premier Lloyd George took a similar stand in Great Britain. We now know that about that time the pestilence broke out among the German forces and helped to hold up their offensive. The tide of victory quickly set in on the side of the allies and has been unbroken since that time. To doubt sooner than we then had any reason to expect, we are rejoicing in victory. This is more than a coincidence. In the midst of our thanksgiving then let us give praise to Him to whom we turned in the hours of our conscious need and record that He has answered our petitions even more speedily than our poor faith at that time enabled us to expect.

The Problems of Peace

THE great world war, with the changed international relationships that it has effected, has created new world problems, the magnitude of which cannot be fully grasped. The mere suggestion of a league of nations to maintain world peace and

promote better relationships among nations is wonderfully attractive and appealing, yet the problems it creates are stupendous. Should we have a standing or international standing army. How is the size of that army to be determined? What proportion of it shall each nation maintain? How will the league raise the funds to meet its requirements? Should disarmament arise among the group of nations over the decisions of the Parliament or Council of Nations, what is to prevent their uniting to defy the other nations concerned? What relationship shall such a League of Nations have with the rest of the east? Will they be admitted or excluded? These are only a few of the problems that confront us as we face the future of the new civilization of the world.

Our own national problems are, in proportion, no less great. One of the tragedies of the war is that in spite of its awful cost in blood and suffering, and in its wastage of wealth, it has done nothing to solve the issues that distracted us before it began. The differences between capital and labor are even more acute than before. Rural dispoverty is continuing and with it the menacing, because unnatural, growth of our great cities in which social unrest is ever becoming more apparent. Fortunes are still being piled up by the few, while the poor are becoming poorer. There can be no doubt that the solution of the increased cost of living has become more frequent and far reaching in their effects.

Farmers, as a class, should lose no time in facing these increasingly important issues. It is fortunate that the Canadian Council of Agriculture is to meet this month to discuss them. Experience has shown that we cannot safely leave their solution in the hands of others not so well posted on agricultural conditions as farmers without danger of our interests being overlooked. Wise leadership is needed at this time as never before. Let us recognize the responsibilities and difficult character of the duties the leaders in the farmers' movement have undertaken to face and give them the loyal united support they need in this time.

Are Farmers Well Organized?

THE approximately 70,000 organized farmers of Canada believe that through their various provincial associations, headed up in the Canadian Council of Agriculture, the farmers of Canada now have a national organization that adequately meets their needs. This claim is being disputed in some quarters. Recently there was organized a Canadian Live Stock Council, consisting of representatives from the leading breeders' associations of the country. There are organizations representing the cooperative wool growers, poultry producers, fruit growers and other similar branches of farming. It is now being claimed that a federation should be made for various organizations to affiliate with the Canadian Council of Agriculture. This proposal is being supported in influential quarters and soon may have to be considered carefully.

Farm and Dairy believes that the Canadian Council of Agriculture, as constituted at present, meets our present needs. Any breeder of live stock, wool grower, poultry producer, or other person interested in any special line of farming, is at perfect liberty to join their local breeders' club, or any other similar body, identified through it with the provincial organization and the Canadian Council of Agriculture. One objection to including some of the organizations that it is suggested should be affiliated with the Council of Agriculture is that they are not only government controlled, they receive government grants and in many cases have government officials holding prominent positions on their boards of management. The organized farmers from the start have aimed to keep themselves entirely free from any government connection of any kind. In this we believe they have acted wisely.

Were the various groups that have been mentioned to be allowed to affiliate with the Council of Agriculture, it would mean that the people associated with these groups would have double opportunity to be heard in bringing their influence to bear in the control of the Council of Agriculture. Should they find it impossible to bring their influence to bear through their local clubs they would then seek to establish a connection through their breeders' or other organizations with the Council of Agriculture. We believe, therefore, that to represent all classes of farmers, why breeders or any other class of men should desire to receive special recognition and not be willing to identify themselves with the movement through their local clubs, we fail to see. Very strong reasons will have to be shown why the Council of Agriculture as at present constituted, fails to meet the needs of all classes of farmers before it will be wise to change the existing form of organization. In expressing this view we have no thought of disparaging the ex-

cellent work the various classes of organizations mentioned are accomplishing. They are all working along important lines and in special fields of their own. These fields, however, are radically different from that of the Canadian Council of Agriculture, which includes in its membership all classes of farmers and with excellent reason claims the right to have the right to represent their interests in the field it covers.

Lack of Machinery Retards Production

WITH the cessation of the war it is estimated that 250 million extra power in Europe alone is required to meet the needs of the population of the allies for food. The feeding of these millions of starved people is bound to increase the demands for food stuffs from this continent. Consequently there will still exist for another year or more as great or perhaps greater demands for increased food production. Every possible means will be employed to produce to the limit.

Man power is not the only limiting element in food production. Of almost equal significance, are horse power and farm machinery. To maintain production we must maintain the usual supply of such kinds of machinery used on the farm, and above all repairs. Horse power, however, has not seriously affected production, as its lack has been largely offset by tractor power. There seems to be no danger of a horse power shortage, but there is a possibility of a serious shortage of the supply of farm machinery.

In pre-war days, farm machinery was comparatively cheap and plentiful. In the rush and stress of farm work, it was often thought better in every way to discard worn-out machinery than to take the time for repairs to come from the shop or factory. Consequently, many a valuable implement has been sent away in the fence corner, or under a tree in a rust while its successor goes on with the work.

It is not the cost of the repairs that tempt us to discard their old implement and furnish the replacement for buying new; but simply the desire to avoid delay in work. Once the new machine is on the job it is easier to see it than to repair the old and as a rule only one machine at a time is required. Consequently the discarded machine which was perfectly good, except for some insignificant part, sometimes costing but little, is unintentionally discarded for all time.

It is said that the life of a binder is three or four years. Supporting the work we do take six or seven years as an estimate, there are few farms that use a binder more than ten days each season in the actual cutting of grain. According to that contention the actual working days of the average machine was 30 or 90 days. Eighty or 90 days of use under the two or three thousand days of idleness is a heavy charge against the farmers cost of operation. This is even more true now than before the war when binders cost \$150, as against \$350 or more. A binder could be made to last at least eight or ten years. Eighty or ninety days of service do not justify the expenditure. Not many farmers would see costly buildings if they did not last any longer in proportion than the binder.

The time has come when it is not only costly to place worn out machinery, but it is even doubtful if it can be replaced to the extent necessary to maintain production. Careful housing and repairing during the winter months will add years to the life of old farm machinery. War industries have been producing almost all of the new machinery and labor and it would be a pity if production were retarded, through avoidable wastes of farm machinery.

What Victory Loan Means to the Farmer

THE 1917 Victory Loan enabled the Dominion Government to advance—
\$100,000,000 to finance last year's wheat crop also
Nearly another \$100,000,000 to finance the sale of live stock products to Great Britain; also
Nearly \$40,000,000 to finance exports of cheese to Great Britain
The 1918 Victory Loan will enable the Dominion Government to finance the sale of the world's surplus Great Britain; also
To finance the sale of beef, pork and other live stock products.
To finance exports of cheese, butter, eggs and condensed milk to Great Britain.
Great Britain will take Canada's agricultural products. She cannot pay cash. The Dominion Government must finance the sales.

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"Is Heaven a Place Where You Eat?"

THIS conversation with a little Belgian child is reported in a copy of Le Bulletin, a local French paper published in Amsterdam and circulated largely among Belgian refugees in that part: A lady who had recently escaped from Belgium, and had brought an orphan with her, whom she had succored near the Dutch border, found that the child, who was about twelve years of age, had been entirely uneducated, in addition to being in a semi-starved condition. After it had been given a good meal, it asked over to the care of the sisters in a local nursery, who later, when it was inquired as to the welfare of her protégé, told her that the child had been started on the rudiments of religious instruction.

Among other things that were taught was the fact that there was a place called Heaven, where good children and people went after death. It was the Abode of the Blessed, and everyone there was perfectly happy.

"Is Heaven, then, a place where you eat?" the child once asked. "Few things could better illustrate the dire straits to which the 1,200,000 children have been reduced than this naive question. Food represented to this child the highest possible happiness, because for the last four years of its life it had been on the starvation point."

If you would alleviate this immense suffering, send your mite, no matter how small it is, to the Belgian Relief Commission, 59 St. Peter Street, Montreal. One \$10 will keep and support a child for a full month. Let the thought that you have aided in this good work comfort you when you read of sufferings that it is impossible to alleviate.

Tractor Questions

As asked by the Department of Agriculture of the United States and answered by Manufacturers of Farm Tractors.

Auto Attachments

Question 8.

Are the auto attachments of any practical value to the average farmer?

OUR opinion is that no farmer is justified in buying an auto attachment except that it be sold to him without payment or settlement by note, guaranteed to give satisfaction, and enough time allowed for him to give it a trial that will prove conclusively that it will run his automobile and not do him any good. Ask Henry Ford this question, or any other automobile manufacturer--Avery Co.

No; only makeshifts, and their use will ruin any motor car.—Advance Bramey Thresher Co.

Possibly so, but their use must be limited to small areas on account of the excessive wear on the automobile.—B. F. Avery & Sons.

IT apparently has been definitely demonstrated by actual field operation that auto attachments are of no practical value to the average farmer, or for that matter, to anyone else. It has been possible by the use of auto attachments to accomplish some work, but with very disastrous results to the auto to which the attachments were applied, and it is the general impression, founded upon practical operative results, that there is but little virtue, if any, in attempting to make a draft machine out of one designed for speedy road travel.—Emerson Brantingham Co.

No. The auto attachment at the best is a makeshift and a makeshift is never satisfactory.—The Four Drive Tractor Co.

No. An automobile is not built especially strong for such work, and it is likely through the premature failure of some part or parts to be an expensive proposition.—Frick Company.

In our opinion, form-a-tractor attachments will not add materially to the benefit derived from the use of a tractor. These attachments are generally installed on cars that have already served their purpose in the pleasure car field, and it is not consistent to expect such a machine to stand up under heavy duty work.—General Motors Truck Co.

VIEWED from a purely practical standpoint, tractors made by using an auto attachment, at best, could be only 50 per cent of a tractor, because, according to government figures, the average farm tractor is

used 50 per cent of the time for doing belt work. Auto attachments are not usually equipped for belt work. Perhaps the strongest reason why auto attachments are not of practical value is that the automobile is not designed for a draft machine. Not only is the engine not designed to develop its maximum horse power continuously, which it would have to do when used as a tractor, but the other parts of the car, such as the transmission, differential, frame braces, etc., are not designed for hard farm work. The average automobile engine does not usually exceed 25 to 40 per cent of its rated horse power, except in unusual cases. The cooling facilities of the average auto are not sufficient to take care of the radiation when the engine is run at maximum horse power continuously. This is evidenced by the fact that a very large number of the attachments for auto supply radiators of larger capacity.

The difficulty and impracticability of changing from an auto to a tractor is an item of great importance in the use of auto attachments. The value of an auto on the farm is that it enables the farmer to communicate quickly with his neighbors, to save time in going to town and in transacting the business of his farm in a general way. Automobiles are designed to do one class of work, while tractors are designed to do altogether different work.—International Harvester Co.

WE doubt very much the practical value to the average farmer of tractor attachments for automobiles. It is possible that for emergency work, for light hauling about the farm, or some similar purpose, a farmer might be justified in buying an attachment. However, under ordinary circumstances it merely means the scrapping of the automobile to double quick time.—La Crosse Tractor Co.

So far we have not seen where the auto attachments have been of any practical value to the farmers. In several cases we know of they have caused the farmer to distrust the real tractor.—Lyon Atlas Co.

Auto attachments are valuable to any farmer who buys one in any way only. They will undoubtedly teach him that a tractor is indispensable, but he will not take the time to change from an automobile to tractor more than a few times at the most, and the automobile construction is not adaptable to tractor work.—Piano Tractor Co.

Auto attachments are valuable to any farmer who buys one in any way only. They will undoubtedly teach him that a tractor is indispensable, but he will not take the time to change from an automobile to tractor more than a few times at the most, and the automobile construction is not adaptable to tractor work.—Piano Tractor Co.

Date of Postponed Dairy Conference

THE Dairy Conference, which was to have been held in Ottawa November 4th to 7th, but which was postponed on account of the influenza epidemic, will now be held November 25th to 28th.

SENT TO SIBERIA

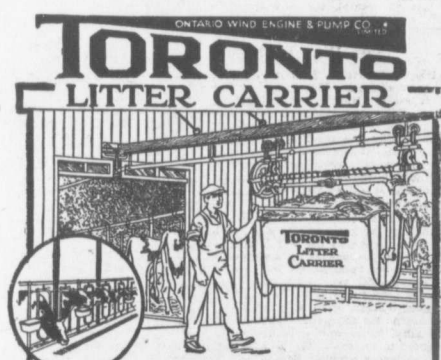
The Government Conscripts Cowan's Cocoa—Cheerful News for Our Men

Toronto, Oct.—A plentiful supply of Cowan's delicious and nourishing Cocoa is assured the Canadian troops that are going to Siberia. Tons of this splendid food were recently purchased by the Canadian Government, and are now en route to a certain port on the Pacific Coast.

Thus, while our soldiers engage the enemy, Cowan's Cocoa will do its share by fighting the cold and protecting our troops from the severest attacks of the Siberian Winter.

Those who remain in Canada should enlist the services of Cowan's Cocoa as a "Home Guard." See that the children are provided with all they require. It makes them robust and protects them from epidemics.

Canada Food Board License No. 11-605.



You Should Have a TORONTO Litter Carrier

It will save you time, money and that heartrending, dangerous labor of pushing a wheelbarrow around a mucky farmyard and up a slippery plank on to the pile.

Don't hesitate! A TORONTO Carrier will do as much work as six men with six wheelbarrows—think what it saves.

Don't forget! We also manufacture TORONTO Universal Stalls and Stanchions which enables you to equip your stables in the most modern way, making them sanitary, comfortable, easy to clean—and pay for themselves by services rendered.

Where's your pen—just scribble a note for our booklet explaining how our modern stable equipments save you money.

THE GNTARIO WIND ENGINE & PUMP CO., LIMITED Atlantic Ave., TORONTO 12 St. Antoine St., MONTREAL



WILL not for sorrow falter not for sin,
But onward, upward till the goal ye win.—F. A. Kemble

Heads and Hearts

By J. J. Bell in Weldon's Ladies Journal.

THE impossibility of putting an old head upon young shoulders forms the substance of one of our most popular and ponderous platitudes; whereas it is really a matter for simple and unalloyed thanksgiving. Less cheerful is it to reflect that, in these days of civilization, and in these days of absurd headgear, many a pair of young shoulders is doomed to bear a head that might serve as an advertisement to Baldness, like poverty, is no crime, but like poverty, it is a hard punishment. So, at least, thought Willy Preston as he turned from the glass and, lighting a cigarette, began to pace the floor of his elegantly furnished bedroom.

Half an hour ago he had consulted a great specialist. During the past three years he had consulted many specialists reputed to be great, and had tried innumerable specifics declared to be infallible. But the great specialist had done what none of the other specialists, what none of the specifics, had succeeded in doing: he had caused Willy to abandon hope. In a cool, unemotional voice he had advised the young man to purchase a wig, and the young man had had his presence even sadder than he had entered, and poorer by five guineas.

A wig at twenty-six! Willy rebelled at the thought. Endowed with thousands a year, yet unable to purchase a single hair of his own! He realized, single hair of his own! He realized, that money could not buy everything. His sensitiveness was extreme. It had been wretched to be bald as an egg, but would it be any less wretched to know that his infirmity was covered by artificial means? He pondered the question deeply and bitterly. He thought of his friends—the men at the clubs, the girls he knew. Already, in imagination, he heard their amused remarks and saw their smiles. It had made little difference that such remarks and smiles would not be in his presence, but he had intended for his ears and eyes. He had enough faith in his fellows to believe that none would even hint at the transformation in his appearance. But how could they help talking about it with laughter or sneers—nits? Not!

Winter was approaching. Could he endure another winter like the last as three. His head was as sensitive as his heart. In cold weather he could not raise his hat to a lady without immediately emitting a loud and violent sneeze. Did the lady stop, it was a full minute ere he could answer her greetings. What a ridiculous figure he must have cut, on more occasions than he could remember, though, to be sure, he remembered more than enough! Of course, you will say that this young man need not have exceeded his infirmity more than was absolutely necessary. But Willy Preston was not built for a recluse, even in a moderate way of business. He was essentially sociable. Moreover, people liked him, and liked him quite apart from his money; he was asked everywhere,

and when he chanced to forget his affliction he was voted delightful company by men and women. For an hour or two, perhaps, he would be the life of a party; then suddenly he would become aware, or imagine himself become aware, of sundry eyes fixed on that which he sometimes ruefully termed his Sahara; he would flush momentarily, struggle bravely for a little while, and finally relapse into a state of depression that lasted for the re-



A Nebraska one who has Made Good in Alberta.

This fine home near Edmonton, Alta., is owned by Mr. G. A. Wilkinson, who went from Nebraska to Western Canada, and is now following mixed and dairy farming.

mainder of the afternoon or evening.

Now, halting before the mirror, he surveyed his head, as he had surveyed it too often in the past, when, after massage or the application of some lotion or other, he was wont to search hopefully for some change, however slight, on the barren expanse. But to-day there was no hope in his gaze—only a sorrowful question. Would it not be better, after all, to wear a wig? He asked his reflection. A wig might, after all, be but a nine days' wonder. People would soon forget that Willy Preston wore a wig. Ah, but—would they? There was an elderly gentleman in one of his clubs who had worn a wig for thirty years, and half the members still referred to him in his absence as "Wiggy" . . . And yet—those awful, sudden sneezes in public places!

Mr. Preston snatched up his hair-brushes, and flung them savagely under the bed.

"You're as much good to me as a gramophone to a deaf mute!"

So saying he passed into his sitting-room, and there rang the bell for his man.

"Simpson," he said, endeavoring to speak naturally, and falling signally, "er—do you happen to know who makes the best wigs in town?"

"For fancy dress, sir?"

"No. For—er—everyday wear, Simpson."

The admirable Simpson's countenance expressed nothing. "I should think Jenkinson, in Albemarle Street, would be reliable, sir," he said.

"I have been advised by my doctor to wear a wig," said Mr. Preston, with a wan smile.

"Very good, sir," Simpson gravely replied.

"So I think you might go round to the shop you have mentioned, and ask them to send someone here at once to—er—well, to send someone here at once."

"Very good, sir." Aid the invaluable Simpson departed.

"I suppose he's having a good laugh," thought his unhappy master. "There's something so absurd about a wig, though I don't see why there should be. It's no worse than the eye-glasses and false teeth that will glare and grin at it. Oh, confound it all! I needn't be so touchy!"

Preston paid forty guineas for a wig, and then decided that he could never bring himself to don it. The weather was unusually mild for November—so everybody was saying, which ought to have made Mr. Preston prepare for a change. The change caught him one afternoon while strolling down New Bond Street. He was peculiarly alive

(triumph of the barber's art. Simpson tended it in a reverential sort of way, but never referred to it. Only on the third day, he said casually:

"What about hair, sir?"

"Hair?" exclaimed Willy, then, "Oh, of course, Simpson, you had better get some here."

"Very good, sir."

On the afternoon of the fifth day Willy summoned all his courage, and set out for his favorite club. He passed several acquaintances on the way. No doubt they did their best to conceal the fact that they noticed the change; none of them, however, was entirely successful. A few yards from the door of the club Willy perceived two ladies of his acquaintance approaching. He moved into a convenient cab and drove to Charing Cross—the first place that came to his tongue—and back. Entering the club at last, and looking neither to right nor left—willy-like—stepped into a burning, fiery furnace—he took off his hat and hung it up in the cloak-room. Then he squared his shoulders, threw up his chin, and with a flash on his placid countenance, marched for the smoke-room. Behind him, in the cloak-room, two young men grinned and whispered. They had no grudge against Willy Preston, but they took themselves to be the humorists of the club. They had risked expulsion on more than one occasion. Within three minutes they decided to risk it again. The tender mercies of the wicked are nothing to those of the practical joker.

Willy went bravely into the smoke-room, and found several of his friends in the familiar corner. Realizing that the situation was as awkward for his friends as for himself, he soon took his leave. After all, he had made the plunge, got over the worst; the net remaining would be a much safer affair.

He sought the cloak-room, feeling bappier than he had felt for days. "Doubtless there were smiles in the smoke-room, but smiles were rare enough in the circumstances. He smiled now, softly, as with care he placed his hat on his head. It was not quite comfortable at the back, but by time he would get used to the conditions. He nodded cheerfully to one or two members, and left the club. The humorists followed at a short distance.

"Those little hooks were an inspiration," said the one.

"Hope he doesn't take a cab," said the other.

Willy did not take a cab. Having gone so far, he was determined to go through with the matter. The new acquaintances he met, the some acquaintances he completed. His growing confidence he strode calmly forward. Yet it was merely a question of braying it out for a few days.

Just then Lady Carruthers was past in her Daimler. She smiled graciously, an up-bent lip, and a nod. It was like tearing the scalp from his head. For an instant he steeled. Perhaps, mercifully, he did not hear the gasps of delight that, though he felt no such emotion, he saw in the eyes of his wife, who, stuffed the wigs into his hat, examined the latter on his eyes, and plucked for the next cab.

Each morning he quitted London in an indefinite period.

It was one of those March days that compel the severest critic of his country's weather to believe in spring; the sky was pale and unblemished, the air still, yet crisp and sweet. Also the valley of the Crete the hills were in all their most majestic grandeur with their gleaming white. Three-quarters of the shoulder of Ben Thor a pair of young men and women sat, gazing whilst they ate assorted sandwiches and drank of tea.

(Continued next week)

The Upward Look

Peace

He maketh wars to cease unto the ends of the earth.—Psa. 46: 9. This is the Lord's doing; it is marvellous in our eyes.—Psa. 118: 23.

BY the time this issue is in our readers' hands it is hoped that the greatest war of the ages will have ceased, and peace once more has returned to the earth. Even now while we write the sounds of rejoicing are in our ears, and though perhaps a little premature, it is expected that any minute the official confirmation of victory will flash round the world, and we can say that at last righteousness and peace have kissed each other.

What a wonderful change has come over the whole military situation during these last few months, and how the mighty have fallen. Only a few short weeks ago the Kaiser talked of a "dictated peace" by the mailed fist, and the writer heard Sir Robert Borden say in a recent speech that the Allies were seriously considering the giving up of either Paris or the channel ports during the summer campaign, as they could not hope to retain both. Now the most astounding successes have crowned the allied arms, and one by one our foes have been completely defeated and overthrown, and the arch enemy of all brought to see for peace. What is the explanation? We believe it has been given in a recent editorial by one of the large Toronto dailies in these words: "The British Premier rightly said that the main difference was undoubtedly due to the 'unity of command.' But very many would go further back than this, and, while not minimizing the value of the unity of command, would recall three simple facts: The American National Day of Humiliation and Prayer on May 30, the Canadian on June 30, and the British on August 4. And they would attribute the marvelous transformation to the Divine power which gave wisdom to the men in command."

This, we are convinced, is the secret of our success. "Not by might nor by power, but by my spirit," saith the Lord. In the midst of our rejoicings it is well to remind ourselves of this, lest we forget.

We have heard much of late that this was a war for the end of war, and must be the last. Of that we are doubtful. While sin exists and the heart of the natural man remains at enmity with God, there can be no enduring peace on the earth, but wars and strife must continue as a natural result. "From whence come wars and fightings among you?" says the apostle. "Come they not hence even of your lusts that war in your members?"

It is just here that all our reconstruction schemes of social uplift and moral reform, our leagues of nations, and our higher education are doomed to failure as a preventive of war. If they fail to recognize this one terrible fundamental fact—the sinfulness of the human heart.—If men have not peace with God they will not live always at peace with one another. It is an utter impossibility.

Even as war is the fruit of sin, so we are told the fruit of the spirit is love, joy and peace, and the greatest contribution that any individual can make to the ushering in of that golden age, when war shall forever cease, is to get right himself with God and to tell others of the story of Jesus and His love. Christ, and Christ alone, can heal not only this open war of the world, but He is the panacea for all its innumerable ills, and in Him lies the solution of all its problems. Though weary centuries of sin, war and bloodshed have rolled on since the angel's song floated over the

earth, still we know that "this same Jesus" who came then is coming again to establish "Peace on earth and goodwill towards men."

Down the dark future, through long seasons, The sounds of war grow fainter, and then cease; And, like a bell with solemn sweet vibrations, I hear once more the voice of Christ say "Peace."

Peace! And no longer from its brazen portals The blast of war's great organ shakes the skies; But, beautiful as songs of the immortal The holy melodies of love arise. J. H. H.

When the Kitchen Sink Clogs

MORE and more, we who live on the farm are having water systems installed in our homes. To have water on tap, both upstairs and down, is a wonderful convenience and one which no one cares to be without after it has once been installed. The sink in the kitchen sometimes gives us trouble, however, if it becomes clogged up. As it is rather inconvenient when living in the country to get in touch with a plumber who can remove the obstructions in the pipes, it is well to know of some method which we may try out ourselves. McCall's Magazine suggests the following method:

"Allow about two inches of water to flow into the sink. Then place an empty vegetable can or similar utensil all over the outlet—the open end down, of course—and move up and down quickly, causing suction. Nine times out of ten this will cause the water to flow out quickly. If this fails, then take the sink for an S-shaped pipe lying on its side. Remove the screw from the bottom of this "goose-neck"; place a bucket under it to catch the water, and probe for the obstruction with a piece of wire. This almost always proves successful. After removing the obstruction and replacing the screw, pour boiling hot water down the drain and there will usually be no further trouble. It is well to use the soda water frequently as it is almost impossible to keep some grease from going into the drain pipe. Coffee grounds, not pulverized, will not stop a sink, but, on the contrary, are quite beneficial if used with a great deal of water as they cut the grease. Chloride of lime should be used now and then as a disinfectant, but great care should be used to wash out the sink thoroughly afterward. Borax and hot water are perhaps safer."

Bury Fallen Leaves

WITH every gust the dead leaves fall, and the children plow through them with their feet to hear their rustle. Then with sticks they gather the leaves into heaps, cover each other with them, or play threshing machine, and have lots of good, healthy, out-of-door exercise. Let the children play gather the leaves. But instead of making a smudgy bonfire that smokes things generally, have the kiddies haul the leaves in their little wagons into the garden and bury them there. You want the front lawn neat, but why not use that plant food for your next year's garden crop? If the garden is sandy, the leaves will help to hold it together and provide humus for vegetable food. If the ground is heavy clay, they will help to open it. Fallen leaves are too precious to be wasted. In years when straw was very scarce, many people gathered leaves for bedding for horse or cow, and this made excellent addition to the manure heap. Try burying, not burning, the leaves this autumn, and help produce more vegetable food next year.—A. A. F.



There's Cheer in the Pictures from Home

To a homesick boy at the front, a picture of Dad waiting at the end of the lane while "Shep" brings up the cows is worth more than the Croix de Guerre.

Pictures of mother, how much they mean to him now! And of kid sister—perhaps she is "wearing her hair up" by this time—all the old familiar scenes around the farm, yes, and that little girl with the big blue eyes that lives down in the village—these will mean a world of comfort to the boy who is lonesome among a million strangers.

The Y. M. C. A., the Red Cross, and kindred organizations are doing a world of good in ministering to the bodies and minds of our boys. But in their hearts, homes are first. Cheerful letters and cheerful pictures from home—these will keep their hearts light and their courage high.

CANADIAN KODAK CO., Limited
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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 this problem now. The one best book of which we know on this subject is "DAIRY FARMING," by Eckles & 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

and instead of being a day of rest, everyone is more exhausted next morning than if they had stayed quietly at home.

I don't want to give folks the idea that I am a crank. I can assure Home Clubbers that I see no harm in a short motor ride on Sunday, so long as the ride contributes to the mental and physical well being. When the car is used on Sunday to the extent, however, when it makes the day anything else than a day of rest and worship, then I say it is time to call a halt.

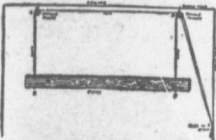
For my part I am very sorry that the gasoline scarcity has been solved, involving as it does a return to the rest- less rush of motor cars all day Sunday.—"Nephew Frank."

A Clothes Bar That is Different
F. M. Christianson, Welland Co., Ont.

THE novel clothes bar which I am about to describe, and of which I am enclosing a diagram, was made by a handy man and is in operation in the kitchen of his home where it has done excellent service for a number of years. It hangs from a 10-foot ceiling, but will work well in rooms with lower ceilings.

The points which predispose us in favor of this clothes bar are:

- (1) The clothes can be run up to the ceiling and left hanging to air after ironing and at the same time be wholly out of the way.
- (2) It does not take up any space which could be otherwise used.



- (3) It is strong and never sags.
 - (4) It can be made by anyone who can drive a nail.
 - (5) A child can operate it.
 - (6) Its cost is only 50 cents.
- The materials required to make this clothes bar consist of two large hooks to screw into the ceiling; one single pulley two inches in diameter and one double pulley of the same size, these costing 35 cents; 25 feet of rope, costing 15 cents and one board five or six feet long and two or three inches wide, which will cost about 10 cents.
- To install this clothes bar, place the middle of the rope around pegs in wall,

designated as "E" in the diagram. Bring one end over one double pulley, bow a hole through the board at "B" and slip rope through, fastening rope at end in a good sized knot in order that it will not pull through. Bring the other end of the rope over the other double pulley and on over the single pulley at "C", then down and through board at "A", similar to "E". The bar may be raised or lowered by winding up the rope on its pegs in the side wall at "E".

This bar works admirably and is so strong, simple and indestructible that it commends itself to anyone who sees it. It is simply grand in a farm kitchen and lends itself to many uses.

Save the Second Spoonful

IN a statement on the sugar distribution difficulty, the Chairman of the Canada Food Board, Mr. Henry B. Thomson, says:

Since last May, when the use of sugar in Canada was rigidly cut down, manufacturers, candy makers, public eating places and large users have played the game fairly, and have aided by the ratings of the Canada Food Board.

Approximately 300,000 tons of sugar will be required in Canada for 1918. Only 12,000 tons of this will be used in the confectionery industry. If the Food Board issued an order absolutely closing down the factories we should disorganize the industry and throw hundreds of people out of work.

If the people in the homes would not put the "second spoonful" of sugar in their tea and coffee it would save 50,000 tons of sugar a year. This amount is more than four times the sugar allotment to the confectionery manufacturers. It could be done with a little good will.

Notwithstanding the order issued on September 15th, there is reason to believe that a large number of people hoard sugar in the home. It is only a little possibly, in some cases, but when multiplied by the number of homes in Canada, it is a huge quantity in the aggregate. There is possibly also a good deal of waste which, if checked by everyone, would make the situation easier.

It is for the consumer to get in behind the Food Board now as the manufacturers have done. There will then be an ample supply of sugar for all.

There is nothing better for removing spots from a rug than the use of ammonia.



Let Music Brighten the Lives of Your Children

Let them grow up in an atmosphere of good music. Let their appreciation of the beautiful things of life be developed by good music. Let them receive the indelible imprint of culture and refinement through the medium of good music. While their young minds are open to receive such impressions, begin their musical, and higher, education with

The NEW EDISON
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This wonderful instrument brings the world of music into your home; RE-CREATED by the world's greatest artists. No matter where you live, your children can have the same musical advantages as though living in the great cities during the height of the musical season. The New Edison does not merely imitate. It RE-CREATES. No human ear can distinguish artists from phonograph. The famous Edison tone tests have proved this, not once, but more than 1500 times.

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"What The Critics Say" and "Mr. Edison's
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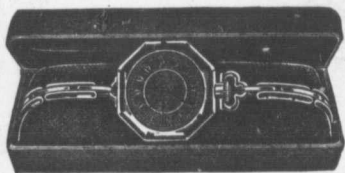
Ask your dealer for Maple Leaf Tires.

DEALERS: Get particulars from leading jobbers.

JOBBERS: Write to us for prices and terms.

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Black Dog-Skin Mitts

Black Dog Skin Mitts made from soft pliable skins, well furred, properly cleaned and dressed, cut with large cuffs, strongly lined, good leather palms, with extra protection. Very comfortable, warm, most reasonably priced; will give long wear and satisfaction. Large cuffs, with pull up over sleeves, and good linings make these warm. Pull size.

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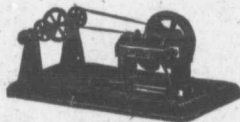
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DEC. 1st

NOT AN ARTICLE BUT WHAT IS WORTH MORE THAN THE AMOUNT ASKED

BOYS! BOYS!! BOYS!!! This is Not a Toy—IT'S A REAL

High-grade Steel Motor with Reverse Switch



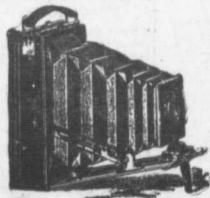
High Grade Steel Motor, on base 10 x 6 in., run from a dry battery; has five grooved fly wheels, each of which will run a different attachment at the same time, fitted with reverse switch. Attractively finished in red and gilt. Shipping weight 2 1/2 lbs.

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CIRCULATION DEPARTMENT FARM AND DAIRY PETERBORO, ONT.



Nearly every man who knows the satisfaction of a clean, smooth, comfortable shave will recommend the Gillette Safety Razor. The one illustrated above is beautifully silver-plated, in a strong and very neat case, and complete with 12 steel blades.

Questions and Answers on Lightning Rods

Information That is Always Sought by Prospective Users of Lightning Rods

FOR the information of the public the United States Department of Agriculture have published a short article entitled "Ten Questions and Answers About Lightning Rods," which we reproduce herewith. The questions are the ten most frequently asked by those inquiring about lightning rods, and the answers are given by experts of the department who have made a special study of the value of lightning rods for farm buildings:

(1) Do lightning rods really protect buildings? Answer: Yes; but the rods must be of proper character, properly installed, and properly grounded in relatively moist earth. Periodical inspection and maintenance in good condition are indispensable to efficient protection.

(2) Do lightning rods on a building increase the danger of its being struck? Answer: Opinion is divided, but a properly installed rod may be struck several times without injury, whereas a single stroke without the protection afforded by the rods may cause disaster.

With insulators or Without.

(3) Should lightning rods be put up with or without insulators? Answer: Without. Buildings with metal roofs, or wherein any metal construction employed is properly connected to earth, are already partly provided with lightning protection. If rods are added to such buildings the rods should be put in direct metallic connection with the roof and other metal work about the building wherever practicable. All down spouts should be led into metal pipes going into the earth to give the proper earth connection, or the spouts should otherwise be well grounded by use of wires or cables. Insulators are entirely unnecessary, and it is proper to have extended metal work in buildings, like heating and water pipes, all electrically connected together and all well grounded. This latter result is gained incidentally through connections made to water pipes, since the latter usually pass through the earth outside the building.

(4) Are gilded or otherwise expensive points of platinum or special metal of fanciful construction necessary? Answer: No; not in the least. Sharp, needlelike points are effective in dissipating small sustained electrical charges, but such electrical manifestations are perfectly harmless. The imagined superiority of such fanciful points is utterly valueless when the rod is struck by a real lightning flash. The useful qualities lightning rod points must possess are inflexibility, mechanical strength and security of installation, and permanence and durability under prolonged exposure to the weather. Stout bluntly pointed iron rods three-eighths or one-half inch in diameter, rigidly and securely fastened so as to project 1½ or 2 feet above the structure to which they are attached satisfy all the requirements.

Material for Conductors.

(5) What material is best for conductors or rods?

This question can not be answered fairly in a single statement. Because of its availability and cheapness, as well as its electrical properties, iron is one of the best materials for rods. Iron, however, rusts and deteriorates under prolonged exposure to the weather. This is only partly overcome by galvanizing; hence galvanized iron lightning rods should be of ample size (not less than one-quarter inch in diameter) carefully installed and subjected to systematic inspection and repair. Two strand cable galvanized iron fence wire of substantial size of the same type as barbed wire, but without the barbs, furnishes a very good material for cheap iron lightning rods. The presence of the barbs constitutes a rather serious in-

convenience in handling and installing such a conductor, and no material benefit is derived from their presence. Copper is better than iron not only on account of its indestructibility, but pliability, which makes it easy to install. Scientists are not in accord in regard to the relative merits of the electrical properties of copper and iron, but in the like far outweigh minor differences in electrical properties. Aluminum is a competitor for iron and copper under exposure to weather is in its favor, but its pliability makes it inferior to iron for points. If low cost is the controlling factor, galvanized iron rods must be chosen, but subsequent inspections must be made and repairs may become necessary. If higher first cost is not an obstacle, the choice should go to copper first or possibly aluminum.

(6) Should lightning conductors be made in the form of solid rods, flat bars or bands, stranded twisted cables, woven stranded ribbons, or hollow twisted cables. Answer: Any of two or more forms may be employed in combination. Conductors should be put up in long continuous pieces as far as possible. Solid round wires one-quarter to one-half inch in diameter are best for this purpose. Conductors of a size larger than one-fourth inch, however, present difficulties in handling and installation if the rods are solid. If then becomes better to use

stranded cables and other similar forms. Long continuous lengths, ample cross section combined with "taper" or "crooked" conductors, render stranded cables, in general, better than any other form of conductor available. Substantial iron points in combination with copper cables from five-sixteenths inch in diameter, for small farm buildings, to one-half inch in diameter, for large important structures, form one of the best possible systems of conductors for lightning-rod construction. There is no good reason for purchasing other fanciful forms of cable at materially greater prices per pound than are asked for standard makes of cable of approximately the same cross section.

Connections at the Base.

(7) Must lightning rods be connected to the earth? Answer: Yes; by all means, and most effectively. Just a few operators in the lightning-rod profession have sought to impose upon the uninformed a system of underground connections instead of a protection. It is impracticable to fully discuss here methods of making connections to earth. In general terms the conductor should be carried down into the earth and away from the building in a trench or other excavation, so as to reach and embed the conductor itself or plates attached thereto into permanently moist earth. Connections with water pipes or other metal work itself connected to earth constitute good grounds.

(8) Are government buildings provided with lightning rods? Answer: Yes; many of them.

(9) Does the government use the

material of the rods or the system of their construction? Answer: No; there is nothing mysterious or exceptional about lightning rods, the material of which they are composed, or their construction and installation. Suspicion may well be aroused as to the reliability of those making extravagant claims of superiority for their particular wares to the exclusion of others.

(10) What is the best arrangement of rods on a building? Answer: A building completely screened and surrounded by and enclosed beneath a cage or network of substantial metallic conductors, all properly interconnected and joined to the earth, would be most effectively protected from lightning discharges. For ordinary purposes a far simpler system is adequate. For example, good protection is afforded by a conductor running along the ridge of a building and extending to the earth, either at the middle of the sides or, preferably, at each of the four corners. Points should rise above any prominent features of the building, such as chimneys or, in the absence of these features, from the ridge of the roof at intervals of 25 feet or thereabouts.

Bacteria, or germs, are not all enemies. Some kinds of bacteria are our best friends. Others are deadly foes. Still others are merely a nuisance. D. H. Jones, Professor of Bacteriology at the Ontario Agricultural College, discusses all these three varieties of germs in their relationship to agriculture, in a bulletin of 100 pages, well illustrated, which may be had on application to the Department of Agriculture at Toronto.

HALLAM'S TRAPPERS THESE 2 VALUABLE BOOKS

GUNS
NETS
TRAPS
HEADLIGHTS
AMMUNITION
ANIMAL BAIT.

HALLAM'S TRAPPERS GUIDE

A pocket size handbook that is used by trappers all over Canada. It is well illustrated and contains 90 pages, English or French, tells about the habits of Canadian and other animals—how and where to set for bearing animals, best style of traps to use for the different animals, kind of bait, and all the other useful information. The regular price of this book is 50c, but we are selling it for just one dollar. If you are interested in trapping, we will gladly send you a copy FREE FOR THE ASKING.

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Full 1918 Edition, 32 pages fully illustrated—full of good bargains in Rifles—Shotguns—Traps—Animal Bait—Headlights—Tackle—Nets and Netting—Hunting—Shoe Packs—Compasses—all the necessary equipment for Trappers and Hunters and Sportsmen. It will pay any Hunter, Trapper or Sportsman to send for this Catalog at once. It is FREE FOR THE ASKING.

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Will be distributed among the Trappers this Season for Raw Furs. The ONE RAW FUR market is "HALLAM'S," and no matter where you are, Hallam will buy your furs for SPOT CASH, at the highest price. All you do, is simply to send your furs direct to "HALLAM'S," and your money is mailed to you the next day. Try us. Thousands of experienced trappers, living in all parts of Canada ship promptly. Hallam grading very fair, and Hallam prices highest.

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The Victory Loan and Farm Prices

Prices of Canada's farm products are fixed, in a large measure, by the demand in Great Britain.

The price of all is governed by the price of the part exported.

Canada has a big surplus of food to export.

It is of prime importance to Canada that the market for that surplus be maintained.

To the farmer, it is of vital importance.

To-day Canada can export only as much of her produce as she can finance. Why is this? Because Britain and her allies must buy where they can get credit. Canada then, must pay the farmers for their produce and turn that produce over to the Allies on credit. Or lose her export market. If Canada cannot pay the bills, the surplus farm produce will stay in Canada—unsold.

Last year's crop was financed by the Victory Loan 1917. Canada borrowed from her people enough money to give Britain the credit she needed. The result was that every Canadian farmer had a market at good prices for his entire crop.

This year's crop must be financed in the same way—by the Victory Loan 1918.

Victory Bonds are, as every shrewd investor knows, an investment of the highest class. The interest rate is good and the payments regular. The security is undoubted and the bonds may be readily turned into cash in case of need.

But—to the farmer Victory Bonds have an even greater importance for in addition to being an investment they will maintain a market at good prices for the crop he now has to sell.

It is therefore, to the interest of every farmer to buy Victory Bonds, to influence his neighbors to buy and to spare no effort to make the Victory Loan 1918 an overwhelming success.

Buy Victory Bonds To-day

Issued by Canada's Victory Loan Committee
in Co-operation with the Minister of Finance
of the Dominion of Canada.

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The Makers' Corner

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

Home-Made Soft Cheese

THE U. S. Department of Agriculture in Bulletin No. 960, desires the home manufacture of soft cheeses:

Neufchâtel cheese should be made from whole milk that tests about four per cent, and cream cheese from milk testing six per cent butterfat, according to the bulletin. Both are made in this way: To a quantity of thirty pounds, or 3½ gallons of milk, add a pint of good starter or clean-flavored sour milk and stir well. Warm the milk to between 80 to 83 degrees F. Then add about eight drops of rennet which has previously been dissolved in a cup of cold water. Stir thoroughly and set the milk aside to curdle. Powdered pepsin (one-half the size of a pea) or one-third of a junket tablet may be used in place of the rennet. The cheese may be made without a starter, in which case the milk should be ripened (allowed to stand at 70 degrees F.) for six or seven hours before adding the rennet.

After 14 to 18 hours, the time usually necessary for proper curdling, pour the milk into a drain cloth and allow to drain from two to four hours or until practically no whey drips from the cloth. Then place the bag of curd between two clean boards, put a 50 pound weight upon it and let it stand for six or eight hours. Remove the curd from the cloth to a pall. Sprinkle two level teaspoonfuls of the salt over it, and thoroughly mix with a potato masher until it has a smooth buttery consistency. Running the cheese through a food chopper produces the same result.

The cheese should then be placed in a crock or enamel dish until ready for use and kept at a temperature of 50 degrees F. or below. If it is to be sold it should be molded into small packages and wrapped in tinfoil, or packed in glass jars.

In nutritive value this cheese compares favorably with other staple foods, especially meat. They are rich in protein and fat and are easily digested. Perhaps the most desirable ways to serve them are in the forms of salads, sandwiches and in combination with other foods such as olives, green peppers, pimientos, pickles, differing kinds of nuts, various vegetables and quary all fruits.

Protest Against Commandeering Butter

A WESTERN paper, in commenting upon the Government's recent order commandeering butter, has the following to say:

"A meeting of the Western creamery men will be held at Saskatoon to organize an association for the prairie provinces, with a view to putting the Western trade on a basis that will guard against such serious effects as are claimed to have come from the commandeering order recently passed by the Canada Food Board.

"The local butter trade has felt the commandeering to a considerable extent, it is stated by some of the producers, and while the order is being patriotically obeyed there is a feeling

that it will work a disadvantage to the interests of the local market. One of the first effects has been a dropping off in the amount of butter produced, the natural result of this being a scarcity of fresh butter and the substitution of storage butter for it at home. This in turn will mean, it is pointed out, that in the heart of the winter, when the storage article has to be mainly depended on, there won't be enough to go around, and the price will then almost surely go up. Edmonton consumers have this prospect before them as a cold-weather fact, but the reason for it is that the boys overseas may have the 6,000,000 pounds good creamery butter that the authorities want to send them.

The reduced price is now being paid by the local creameries for butter fat. The price on the finished product having been set at 46½ cents, less the freight, the manufacturers have been compelled to pay less to the farmers, who are now receiving 41 cents for butter fat instead of probably 45 cents that they would probably be getting in the fall months if the commanding order had not been passed. Some of the country producers are not taking kindly to the new scale, and are discontinuing their shipments to the creameries. Others are making butter at home, there being no restriction on either the quantity or the price of dairy butter.

"It is the intention of the creamery men of the three provinces to organize themselves into an association for protective purposes, and their meeting in Saskatoon, following the conference in Ottawa, will determine the lines upon which it shall be formed."

Experience in Pasteurization

WESTERN creamery men are practicing pasteurization more extensively than the butter makers of Eastern Canada. At the last Manitoba Dairymen's Convention Mr. Joe Donald, of the Russell Creamery, after the meeting the benefit of his experience with pasteurization:

"During the last few years, it has been proven beyond a doubt that by pasteurizing our cream to around 170 degrees Fahrenheit, we kill the enzymes that could not be killed by the old method of pasteurizing to 145 degrees F., and by so doing we have given our butter far better keeping qualities in storage. This is one of the best reasons that we in Western Canada can put forth in claiming that it pays to pasteurize, for the greater portion of our butter is made during the months of June, July, August and September, and put into cold storage for periods varying from three to eight months.

"At Russell we started to pasteurize in June, 1916, and we have pasteurized nearly all our make since then. The first year we churned immediately after cooling, with the result that our butter was short-grained and did not suit the eastern market, but the point that decided us to continue pasteurizing was the fact that some of our June make of butter was held in Winnipeg until the following June, and not a box of it went fishy in storage. The box of short grain we overcame by holding from two to three hours, after cooling down to churning temperature, before churning.

"In regard to the actual cost to the creamery, it cost us one-tenth of a cent per pound butter manufactured to cover the fuel that was required to pasteurize and cool our cream over the cost of manufacturing the raw cream, but there are a number of

When The Factory Closes

In a few weeks scores of the Cheese and Butter Factories over Ontario and Quebec will be closing for the season. At that time hundreds of the patrons who give orders to form new connections for the shipping of their milk quantities. The following list of firms are in a position to handle large quantities. We suggest that you patronize them.

WANTED

100 Shippers of Milk and Cream

Permanent Shippers—Winter and Summer—If you live within 100 miles of Peterboro, write us at once for full particulars

PETERBORO MILK PRODUCTS, LIMITED

G. A. Gillespie, Manager

PETERBORO

ONTARIO

BOWES

Butter Sets the Standard

CANS SUPPLIED

EXPRESS PAID

ACCURATE TESTS

PROMPT RETURNS

EGG CASES SUPPLIED

Bowes Creamery Co., Ltd. - Toronto

CREAM

This is to advise our present shippers and all others who may be interested in a market for cream that a very decided

ADVANCE IN PRICE

is due—it may materialize before this type is set.

Drop a line, and we'll tell you all about it—and our service, too.

The Toronto Creamery Co., Ltd.
9 CHURCH ST., TORONTO

CREAM WANTED

WE
PAY
EXPRESS
CHARGES

We buy cream for butter-making purposes by percentage of Butter Fat, and give a test of each individual shipment.

We supply 8-gallon or 10-gallon cans for shipping and pay express charges within a 300-mile radius of Toronto.

Drop us a card and we shall be pleased to give prices and further information.

WRITE
FOR
OUR
PRICES

CREAM WANTED

Ship yours to us, as we must have it to supply our well-established trade here than any other creamery. We furnish cans and pay express charges. References any bank.

MUTUAL DAIRY & CREAMERY CO.

743 King St. W.

Toronto, Ont.

THE T. EATON CO LIMITED
TORONTO - CANADA

FREE

A Victory Bond

with every carload of Feed purchased from us during the campaign.

*Yours for the
Victory Bond*

**The Caldwell Feed and
Cereal Co., Limited
DUNDAS**

Dear Mr. Breeder:

If you are planning to hold an Auction Sale, we believe we can handle it to your satisfaction.

Yours truly,

F. H. McCULLOUGH & SON,

NAVAN, ONT.



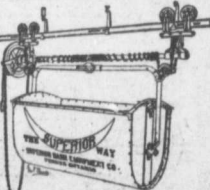
SUPERIOR

Is the Carrier that boys love to operate

Clean your stables and handle the manure the "Superior Way" — it's easier and 100% more efficient — your boy will take keen delight in cleaning the stable—if you own a Superior Manure Carrier you will be interested in a Superior Carrier—investigate its merits.

Write me for Descriptive Folder—GEO. F. MAUDE, Mgr.

SUPERIOR BARN EQUIPMENT CO.,



FERGUS, ONT.

other items that any creamery must take into consideration and make provision for before they start to pasteurize. If a creamery has only enough water and ice capacity to take care of their make when manufacturing from the raw cream then they will require twice the amount of water and half as much more ice to take care of the same make when they start to pasteurize. Then the equipment for pasteurizing must be such that heating and cooling won't take too long, and a creamery must figure on more expensive vats, and they will also find that these vats or pasteurizers won't last as long as when used only to cool raw cream down to churning temperatures. This is due to the action of the acid on the copper linings, when cream is at pasteurizing temperatures. I haven't been able to figure this all out, but I feel that half a cent per pound will cover all the extra cost of pasteurizing.

"Mr. Gostick has given us a couple of sketches of how this extra cost may be recovered by the creamery, and I think that the latter one of 35 per cent specials and 15% that would otherwise have graded No. 2 will be the way that will work out in the average creamery, but we can all work for the first of 50 per cent specials, and when we have succeeded in this we will have put Manitoba butter in a class by itself on the world's markets.

"However, if we do not make any more money by pasteurizing, yet our home market is asking for pasteurized butter, and as years go on our produce merchants are going to be more insistent in asking for pasteurized butter for storage purposes, and the creamery man that does not make provision for this will soon find that his yearly balance sheet will show him that there is something wrong with his methods of doing business.

"There is another factor that we creamery men have to reckon with now on our home market, and which we should not overlook—the sale of oleomargarine. If we are to retain the demand for our butter that we should, then we must pasteurize in order to ensure the creamery butter having good keeping qualities and finding its way to the consumer in as good shape as it left the creamery. Nothing will drive people to use margarine quicker than poor butter."

Mr. Donald then emphasized the importance of pasteurizing the butter used in the export trade, and concluded as follows: "A buttermaker will find that the manufacture is easier after he has gotten to know just what temperature to churn at, and what to wash at, and he will also find that his make is far more uniform. The only part in his score card to differ very much will be the flavor, and over this we butter-makers haven't very much control, except as we grade our cream and pay for it on a strictly quality basis. The reputation of the creamery will be greatly enhanced. And it pays the creamery."

Sugar for Condenseries

THE Canada Food Board has imposed restrictions on the amount of sugar used in the manufacture of condensed milk. The order reads as follows:

1. No manufacturer of condensed milk shall use during the month of October, 1918, or any month thereafter, more sugar than such manufacturer uses in making condensed milk for domestic trade in the corresponding months in 1917 except as herein after provided.
2. Special permits will be granted for the purchase of sugar for use in manufacturing condensed milk for sale to the British or Allied purchasing agents.
3. Sugar certificates for purchasing all such sugar will be issued on the above basis by the Canada Food Board.

Notes, Queries and Answers

Lymphangitis

I HAVE a nice team of bay mares, full sisters, six and seven years old. About five weeks ago when I want to turn them into pasture in the morning the left hind leg of the six-year-old had started to swell a little and was very sore, so more and more the next day it got to the floor and broke of two hours it had swollen to the body and about four inches down the belly, and I gave her the following doses: 1/2 pint—3 ounces oil of hemlock in 30 minutes three ounces sweet nitre, in 30 minutes inserted salt. She made her water which was cloudy at first, at the finish was sort of gritty and big phlegm, bitter slow and after it had worked I gave one and a half pints of linseed oil, the next day I gave one I have given her little in boiled oats and bran, and a salt salpeter every other day. I also gave her a tonic every other day of nitrate of potash one-quarter lb., common salt one-quarter lb., one-quarter lb. gentian root, one-quarter lb. The swelling left the swelling will nearly all leave the leg, but it will swell up very bad in a very short time. For the last two weeks I have been feeding Dr. Hen's tonic instead of the first tonic. I have also bathed the leg frequently with hot water, which would take down the swelling, but it would swell up again inside of an hour. Could you please tell me what is wrong with her and what is the cause of it, also what I can do for her.—M. M. H., Muskoka District, Ont.

This was a case of lymphangitis, commonly called "weed" or "a shot of grease." It usually occurs after the horse has stood idle and been well fed on grain for a day or two. On "Monday morning disease." It occasionally occurs without appreciable cause. Treatment in the early stages consists in giving a purgative at once and following up with four drams nitrate of potassium twice daily for two days and allowing rest until the acute soreness has disappeared, after which the patient should be given regular work or exercise. Your treatment was extraordinary with the exception of the purgative. Local treatment consists in bathing the leg frequently with water and after bathing rubbing with a camphorated liniment. As the inflammatory stage has now passed, bathing will do no good. Give one dram of iodide of potassium three times daily. (If this interferes with her appetite, reduce the dose to 40 grains.) Give her regular work or exercise and when standing keep her leg bandaged. Hand rub well before putting the bandage on and after removing it. While the bandage should apply constant light pressure, it must not be tight enough to hinder the circulation. In some cases the leg remains permanently enlarged, a condition called "Elephantitis."

Sand Crack

I HAVE never seen anything so bad as cracks in cow hoofs, have a mare with one very bad crack right in the front of the hind hoof, from front to the bottom. Can they be treated?—J. H. Frontenac Co., Ont.

Sand crack can be successfully treated by any means that will prevent the crack opening and closing. All dirt must be cleaned out of the crack. A transverse section must be made through the wall at the junction of the wall to the hair, in order that the new hoof as it grows will be disconnected with the crack. Then some means must be adopted to keep the crack closed. The plan that has given the writer the best results is to make a deep cut in the horn about one inch on each side of the crack and about mid-way between the coronet and lower margin of the wall. The two iron stamps with a small grip to catch into the cut on one end and the other end which reaches nearly to the crack, may within one month be turned up the other way an inch or so, to turn up the old way with a nut on one end and a ball like a screw on the other, will put

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Ad. Talk

DON'T BE A HOG

ONCE there was a hog who drank a whole barrel of swill. He did so in the bottom of the barrel, then he stood sick. Silly, wasn't he? Well he wasn't one bit more silly than the dairy advertiser who pays advertising rates of indiscriminate circulation, in other words, only the general farm papers that he reaches every dawn at sily do not appreciate the value of a barrel of swill. The advertiser who pays for advertising in the general farm papers, just as that potter would lose his barrel. A strange part of the matter is that the fellow who makes this mistake in "Advertising is no good," and saying, "It is the farthest thing from my mind to make comparisons between my mind and swill. Each is perfectly right in its own place. I have no quarrel with bringing out this, which I want to see advertised, as just about the same value as the dairy advertiser's sale of barrel of swill had to the hog. It was an unnecessary thing to do, otherwise would it do not mean that a farmer should not subscribe for more than one farm paper. Even the most intensive dairy farmer should subscribe to two or three farm papers in addition to Farm and Dairy. "Keep your ears open along other lines" is a good motto. The dairy farmer is a mighty busy man and at the present time of year, he is likely to be the advertising columns of his dairy paper, but he will not get his general farm paper, but is not likely to be the advertiser in the class by itself. This is one of the reasons why Farm and Dairy when it comes to getting ACTUAL RESULTS for secure best results must devote more attention to reaching dairy farmers, and dairy farmers are reached through a dairy paper.

The man who wishes to secure best results must devote more attention to reaching dairy farmers, and dairy farmers are reached through a dairy paper. If he wishes to secure best results must devote more attention to reaching dairy farmers, and dairy farmers are reached through a dairy paper. This is one of the reasons why Farm and Dairy when it comes to getting ACTUAL RESULTS for secure best results must devote more attention to reaching dairy farmers, and dairy farmers are reached through a dairy paper. If he wishes to secure best results must devote more attention to reaching dairy farmers, and dairy farmers are reached through a dairy paper. This is one of the reasons why Farm and Dairy when it comes to getting ACTUAL RESULTS for secure best results must devote more attention to reaching dairy farmers, and dairy farmers are reached through a dairy paper. If he wishes to secure best results must devote more attention to reaching dairy farmers, and dairy farmers are reached through a dairy paper. This is one of the reasons why Farm and Dairy when it comes to getting ACTUAL RESULTS for secure best results must devote more attention to reaching dairy farmers, and dairy farmers are reached through a dairy paper.

C. G. McKILLIGAN,
Live Stock Representative,
Farm and Dairy, Peterboro, Ontario

THE ARBOGAST SALE.

IT is some time since there has been a sale which has created the interest which is being shown by the coming big sale of Holsteins being held at the Tison Stock Farm, Peterboro, Ontario. Many people are wondering why it is that just when they are beginning to realize the benefits of their breeding operations the Arboagast sale have turned around and had a big sale. The reason is this.

Anyone who has visited Villa View is aware of the fact that their building accommodation is exceedingly limited in comparison to the size of the farm. The Arboagast herd has gradually been increasing until they have come to the point where they have to either build or sell. Owing to the high cost of labor and material the idea of building at the present time is out of the question, and a general clean out and carry a good stock till after the war. Then they will rebuild.

It would have been very easy for them to have a sale, dispose of a few of their poorer cows and retain the best ones in the herd. Rather than do this, however, they are putting the best they have into the sale and they absolutely guarantee them all without holding or without any reserve. Everything in the sale will be absolutely sound. They have a few blenny fall crop of calves, but these and this fine produce bulls, will not be included in the sale.

To make a still better sale they have retained Mr. M. H. Healy of Springfield, and Mr. A. C. Herby, of Brockville, to sell, making a four and eight head, respectively, to be held in hand.

Not only has the Arboagast herd made a reputation in the show ring and in

record work, but they are also profitable producers. This statement is proven by the fact that for the past two years the annual returns from milk sales has been over \$6,000, and this, besides the raising of a big crop of calves each year.

Breeders who are interested in high-class Holsteins should plan to attend this sale, but for further particulars watch for the big ad. in next week's issue.

Coming Fall Sales

- NOVEMBER 15TH.—O. O. Nelson, R. H. 2, Brampton, Ont. Holsteins at Beamsville.
- NOVEMBER 21ST.—J. E. Smith and Son, of Millgrove, Ont., will offer a number of fine head of registered pure-bred Holsteins.
- NOVEMBER 27TH.—Dundas-Georgetown AYRshire Club.
- NOVEMBER 27TH.—London District Holstein Breeders' Club.
- NOVEMBER 30TH.—Arbogast Bros., Strathroy, Ont., Holsteins.
- DECEMBER 4TH.—Erie Kitchen, St. George, Ontario, Pure-bred Holsteins.
- DECEMBER 5TH.—Elgin Park Holstein Breeders' Sale of Holsteins at St. Thomas.
- DECEMBER 10TH.—R. R. Fry, Willow Grove Stock Farm, R. R. 1, Drumbo, Ontario, Holsteins.
- DECEMBER 11TH.—Wolland County Holstein Breeders' Club.
- DECEMBER 17TH.—Oxford County Holstein Breeders' Club.
- DECEMBER 18TH.—Brant County Holsteins' Club.
- DECEMBER 19TH.—Southern Counties' AYRshire Breeders' Association.
- DECEMBER 19TH.—J. W. Johnson, R. R. No. 2, Hawkesbury, Ontario, Holsteins.



FOR SALE, Our Herd Size King of the Tensers

No. 27979

His Dam and Sire's Dam average:

- Milk, 154, 108, 60
- Butter, 7 days 28, 24
- Milk, 161, 6, 6
- Butter, 30 days 95, 75
- Milk, 27, 149, 60
- Butter, 30 days 95, 75

Weight over 1 ton. Age 4 backward, individual and satisfactory.

LYNN RIVER STOCK FARM
Mrs. Wallace Smeets Own

ROYALLY BRED
50 HOLSTENS 50
5 MALES At Auction 45 FEMALES
Thursday, Dec. 5th, 1918, at 1 p.m.
AT ST. THOMAS, ONTARIO

The 3rd Annual SALE of Pure Bred Registered Holsteins of the ELGIN PURE BRED HOLSTEIN BREEDERS CLUB

No 3 teaters, no slack quarters, no sily-ing. Every animal must be sold. LOOK—

- A son of a 26-4 lb. cow, sired by a 33-0 lb. bull.
- A son of Correct Change, a 30-13 lb. cow.
- A daughter of Maple Crest DeKoi Champion, who is a brother to a 35-10 lb. cow.

Others bred to Pontiac Korndyke 3/4, a half-brother to May Echo Sylvia.

Watch our next ads. They are interesting. Write for Catalogues and Come.

D. CAUGHELL, Pres. L. H. LIPSITT, Sales Mgr. E. C. GILBERT, Sec.
R. R. 8, St. Thomas Straffordville St. Thomas, R. R. 7

The "O'Reilly Stock Farm" Holsteins

27,221 lbs. milk and 1,060 lbs. butter in 1 year is average for the two nearest dams of a beautiful bull we are offering at the present time. His dam is our 25,000 lb. cow, Calanthy Johanna Nig, and his sire's dam is the 25,000-lb. cow, Rauwerd.

He is about three months old, an AI individual and nicely marked. This line of breeding is hard to come by. Write us at once.

HE IS PRICED REASONABLE.
JOSEPH O'REILLY R.R. No. 9 PETERBORO, ONT.

LAKEVIEW HOLSTEINS

Present offerings are as follows:—

- LAKEVIEW KING SIEGIS PONTIAC, a 8-months-old son of a 15-13 2-year-old daughter of Widdowson Dutchland Arie, Canadian champion mature cow, 43.06 lbs. and sired by Dutchland Colantha Sir Mona.
- No. 3—LAKEVIEW COUNT HATTI, a 9-months-old son of a 17-13 2-year-old daughter of Lakeview Peter Cadian champion mature cow in 1 day, and sired by Dutchland Colantha Sir Mona. These bulls will grow into money as their dams are only half-bred and most certain to make big records this spring.

Terms: Cash or time.

MAJOR E. F. OSLER, Prop. T. A. DAWSON, Manager
Lakeview Farm, Bronte, Ont.

\$25.00 Offered for a New Farm Name

The undersigned offers a special prize of twenty-five dollars for a farm name which will be acceptable to himself and the Holstein-Friesian Breeders' Association of Canada, the name chosen to take the place of "Silver Spring Dairy Farm," Deschambé, P. Q., which is being established as the home of pure-bred Holstein cattle. Any name submitted must reach our office not later than November 15th, 1918. The object of this is to secure a short name.

In the event of more than one competitor submitting the same name finally accepted, the prize money will be awarded to the party whose envelope bears the first date stamped by office at mailing point.

JOHN LUMSDEN Banque Nationale Bldg. Ottawa, Ont.

50 the London District 50
Head Pure Bred HOLSTEN Breeders' Club Head
WILL SELL
Fifty Purebred Holstein Friesian Cattle
ON
WEDNESDAY, NOV. 27, 1918, AT 1 P.M.
SALE WILL BE HELD AT
BRUNSWICK HOTEL STABLES CITY OF LONDON Cor. York & Talbot Sts.

Included in the sale will be a large number of females, fresh or due to freshen soon, some chosen young heifers and bulls of excellent quality and breeding; females from or bred to such bulls as Baron brother to May Echo Bull; Bull; Hildreth Count Boto, a son of a Bull Flanders May Payne, a 34-lb. bull; a 27-77 three and a half year old bull, whose two nearest dams average 31 lbs., and grandsons of King.

If you want something choice, come to London on November 27th.

For Catalogues write
Fred. Rodkin, R. R. No. 2, Wilton Grove, Ont.
L. H. Lipsitt, Sales Mgr.
T. Merrit Moore, Laird & Johnston, Dr. Shaw, Auctioneers.

ed in the cattle market last week, and trading was more active than for some weeks past. The total number of cattle offered for sale was about normal, but choice killing stock was scarce, with a good percentage of the week's receipts consisted of canners. Towards the close of the week prices eased up, and common culls and canners were again selling on a level with the previous week's closing quotations, or fifty cents below the price prevailing on Monday.

Cows and bulls sold at an advance in price in sympathy with other grades of cattle; a few choice cows and bulls realized around \$10 each, while the best ones moved from \$5.75 to \$9.50. Stockers and feeders were in better demand at prices ranging 50 cents above the previous week's sales. There was a keen inquiry for calves and choice calves sold generally from \$17 to \$19 per hundred, while a few realized \$17.75. Heavy fat calves continued to move slowly.

The hog market was a trifle stronger. Sows sold on Monday at \$18 per hundred, fat and watered. By Wednesday, prices had advanced generally to \$18.50, while a few hogs were sold at \$18.50.

Heavy steers, choice	\$12.00 to \$14.00
do. good	12.00 to 12.25
Butchers' steers and heifers, choice	10.00 to 11.00
do. good	9.00 to 10.00
do. medium	8.25 to 8.75
do. common	6.75 to 7.50
Butchers' cows, choice	9.00 to 10.00
do. good	7.00 to 8.50
do. medium	7.00 to 7.50
do. common	6.75 to 7.25
do. canners	3.25 to 4.00
Butchers' bulls, choice	10.00 to 11.00
do. good	9.00 to 9.50
do. medium	7.75 to 8.50
do. common	7.00 to 7.75
Feeders, best	9.50 to 10.00
Stockers, best	9.00 to 10.00
Wethers, non spinners, choice	140.00 to 150.00
do. common to medium	85.00 to 100.00
Calves, choice	15.50 to 16.00
do. medium	12.00 to 13.00
do. common	8.00 to 10.00
do. grass	6.00 to 8.00
Lambs, choice spring	15.50 to 16.50
Sheep, choice handly	9.50 to 10.50
do. heavy and fat backs	6.50 to 6.50
Hogs, fat and watered	18.25 to 20.00
do. off cuts	18.50 to 20.00
do. feds	17.50 to 17.50
Less \$1 to \$2 per 100 lbs; less \$1 to \$1.50 on hogs; less \$1 to \$1.50 on stags; less \$1 to \$1 on hinds.	

INFLUENZA PUTS DAMPER ON THE CHURCHILL SALE.
I may be said to have been the cause of rather low prices in the sale of Hants held by Mr. A. W. Churchill at his

farm near Gananoque on October 30th. In the first place, at the time of the sale, members of the Churchill family were suffering with the prevalent measles and otherwise likely local buyers naturally showed a tendency to stay away. Secondly, the general prevalence of the disease and the danger of contracting it when travelling prevented many outside buyers from attending, who otherwise would have been there, and thirdly, owing to the fact that the market had gotten out of his bad only the day previous to the sale, being only partially recovered from the loss of the previous day and almost impassable roads. Some of the cows reached their value, but others went for less than they were really worth.

The highest price realized was \$325, sold for Butter Girl Pauline, who was sold to C. Ayer of Harlow, Ont. The next highest price was \$250, paid by J. E. Henderson of Kingston, for Hillcrest Henderson.

Of 25 animals sold, including a bunch of male calves the following animals sold for over \$100.
Della Bookler Pride, \$275, C. Ayer, Harlow, Ont.; Iuka Lady Pontiac, \$140, H. Wm. French, Phillipville; Daisy Akkum, \$120, C. Churchill; Jones' Falls; Hengerveld Prince Leo Seign, \$225, H. Wm. French; John DeKok Wayne, \$110, Bookler Bros.; Pontiac; Wayne Edge-Girl, \$110, G. McCormick, Gananoque; Johanna Echo DeKok, \$160, M. O'Hara; Miss Gladys Pontiac, \$125, Bookler Bros.; Hillcrest Hengerveld, \$280, J. R. Henderson; Kordyko Echo, \$140, Bookler Bros.; Portsmouth; Iris Hengerveld, \$120, Wm. Featherstone, Gananoque; Kordyko Grandby Pontiac, \$100, L. Bryn.

NOTES FROM THRU TROUT STOCK FARM.

M. R. WM. THORN, of Lynedoch, Ont., in sending in his ad, gives the following information regarding the stock which he is offering:
These animals are all No. 1 breeding and nicely marked. The first one mentioned is a son of Bright Lassie, one of the very best producing Arrshire cows in Canada. She is one of the kind with large teats and splendid shaped udder. The other one is a grandson of an imported cow, Lanesbrook Grace Darling. Breeders who are desirous of securing Arrshires of good quality and high production should get in touch with Mr. Thorn, regarding what he is offering.

AVONDALE FARM AT THE ARBOGAST SALE

WE are consigning eight head, including the only bull which directly combines the blood of MAY ECHO SYLVIA and the famous RAG APPLE KORNDYKE 8th. There are seven females, several being daughters of WOODCREST SIR CLYDE. All females old enough have fine records and are bred to CHAMPION ECHO SYLVIA, the son of the great MAY ECHO SYLVIA.

HERE IS A GREAT OPPORTUNITY TO GET THE BLOOD OF THIS WONDERFUL COW.

LOOK FOR OUR ANNOUNCEMENT NEXT WEEK

AVONDALE FARM BROCKVILLE - ONT. A. C. HARDY, Proprietor

A Breeders' Sale ARBOGAST BROS. WILL SELL

Their Herd of 60 HOLSTEINS at the 60 HEAD Senior Stock Yards TORONTO ON

Tuesday, Dec. 3rd, 1918, at 12.30 p. m. sharp

TO FURTHER ENLARGE THE SALE A. C. Hardy will consign There will also be Six Head from the herd of M. H. Haley

This should be Canada's greatest sale because we will sell more daughters sired by a 35 lb. bull, more sons sired by a 35 lb. bull, more cows in calf to a 35 lb. bull, and more bred daughters of a 35 lb. bull, more males and females whose two nearest dams average over 30 lbs. than were ever offered to the public in Canada before. There will be three 30 lb. cows, six daughters of 30 lb. cows, and five granddaughters of 35 lb. cows. Four granddaughters, sons and grandsons of 30 lb. cows and 20 lb. two-year-olds.

WATCH FOR OUR BIG AD. NEXT WEEK

IMPORTANT

We guarantee to sell without by-bidding or reserve. Every animal is guaranteed free from contagious diseases. Every animal two years or over has been a regular breeder, and guaranteed free from abortion, for we have never had it.

For Catalogues write ARBOGAST BROS., Sebringville, Ont. Clerk, THOS. H. SMITH. Auctioneers, KELLY & HAEGAR.

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Larger Profits
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Cows and Hogs---
Cereals saved for
Overseas---
Increased Live Stock
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Under any eventualities
in connection with the
War there will be a
grave shortage of
foods, feed stuffs
and live stock
for a long
time to
come.

These are results which should commend themselves to Ontario Stockmen from the use of

"STANDARD" FEEDS

FOR HOGS
FOR DAIRY CATTLE

These Feeds are made up on the authority and experience of the best practical feeders and live stock experts on the Continent. Government supervision controls PRICE, QUALITY, and SALE and GUARANTEES COMPOSITION.

"STANDARD" HOG FEED

Contains:—
at least 6% Tankage
10% Oil Cake Meal
20% Shorts
33% Corn or Barley

Balance is made up of barley, corn hominy, barley feed, or any other feed approved by committee in charge.

Completed feed must contain 16% protein, 4.5% fat and not more than 6% crude fibre.

With hogs selling at \$18 per cwt. could afford to pay up to \$74 per ton for "STANDARD" Hog Feed. As a matter of fact, its cost to you is only about \$60 per ton in car-load lots.

"STANDARD" Hog Feed contains high-grade concentrates which are low in fibre. "STANDARD" Hog Feed can be fed alone profitably from weaning to finishing with or without skim milk or whey.

"STANDARD" Hog Feed can be mixed with a small proportion of barley to make the very best finishing ration.

"STANDARD" Hog Feed can be mixed with one-quarter of its weight of shorts for the best weaning mixture.

The price at which each mill sells must be approved by the committee, and this price must represent the actual cost of the ingredients plus a reasonable margin for expenses.

Announcements regarding the Dairy Feed will be issued later.

"STANDARD" DAIRY FEED

Contains:—

at least 48% of oil cake meal, cotton-seed meal, soya bean meal and gluten feed (not more than 20% of total feed shall be cotton-seed meal); at least 15% corn or hominy. Balance is made up of one or more of barley, bran, corn hominy, beet pulp or oat feed, or any other feed approved by the committee.

The completed feed must contain 22% protein, 4.5% fat and 45% soluble carbo hydrates and not more than 10% crude fibre.

"STANDARD" HOG FEED IS NOW ON THE MARKET

"Standard" Dairy Feed is expected to be on the market in the near future.

For further information about these feeds, location of supplying Mill nearest to you, prices, etc., write to F. C. Hart, Director Co-operation and Markets Branch, Parliament Buildings, Toronto

Ontario Department of Agriculture

HON. GEO. S. HENRY, Minister of Agriculture

DR. G. C. CREELMAN, Commissioner of Agriculture



Use "STANDARD" Feeds