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LONDON, ONTARIO, FEBRUARY 6, 1919.

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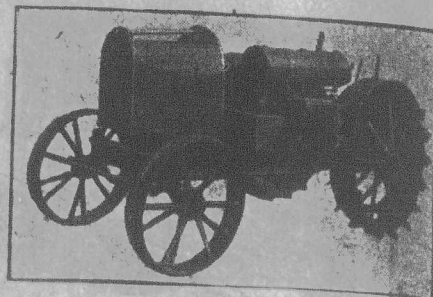
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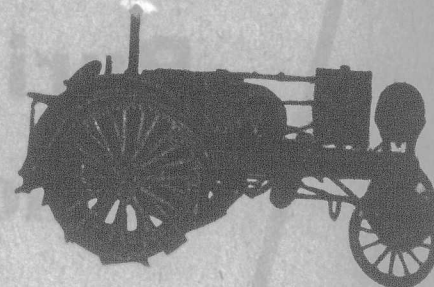
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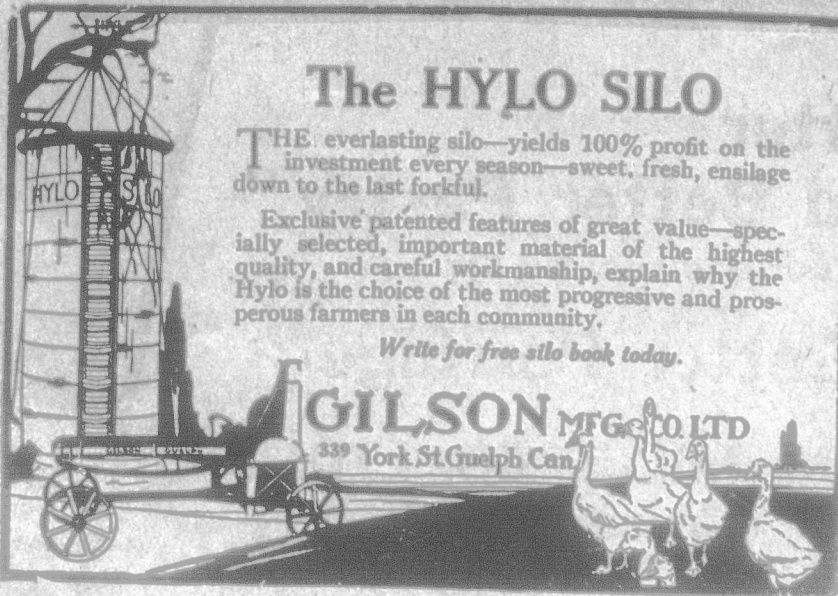
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CANADIAN Cattle have, during the past few years, increased in numbers to a point where advantage may be taken of the tremendous market for beef opening up in Europe. During the war, our exports grew, but to maintain and increase our present trade means that we must make a determined effort to bring about a general improvement in quality, and to provide in volume, beef of the standard demanded by this market. To effect this improvement, it is necessary to

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The Scrub Sire has undoubtedly done much to prevent a more healthy development of Canadian Agriculture. He is responsible for economic losses amounting to millions of dollars annually, for lean pocket books, unpaid mortgages and for much of the discontent upon many farms.

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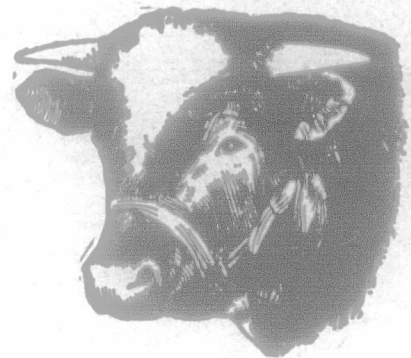
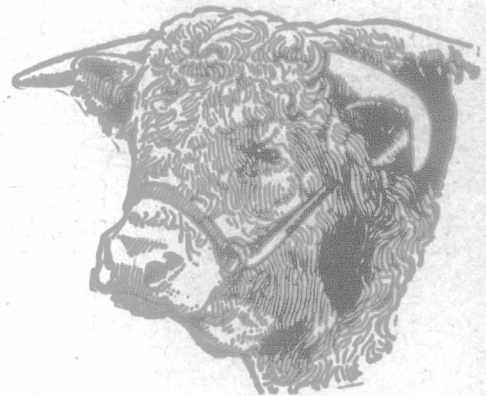
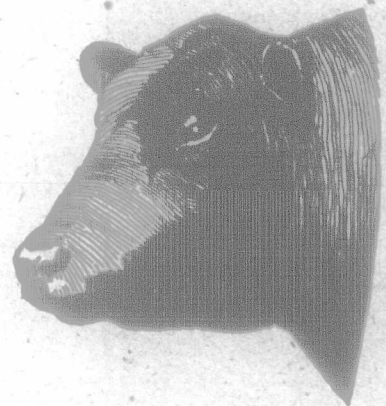
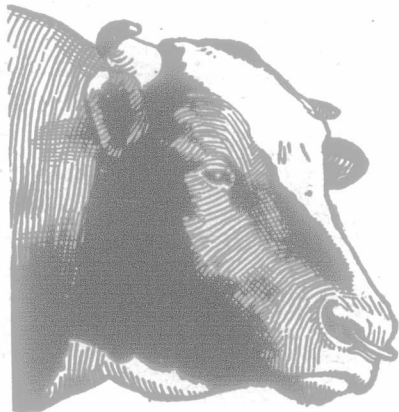
That "Like Tends To Beget Like" has been proved beyond doubt. Many great herds carry the marks of some noted bull. Conformation, thickness and evenness of flesh, uniformity and quality may be stamped upon progeny by a good sire whereas the very opposite characteristics follow in the path of the Scrub.

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*conserve and build up the herds—improve
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Live Stock Branch

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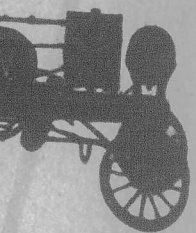


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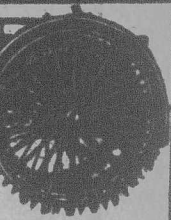
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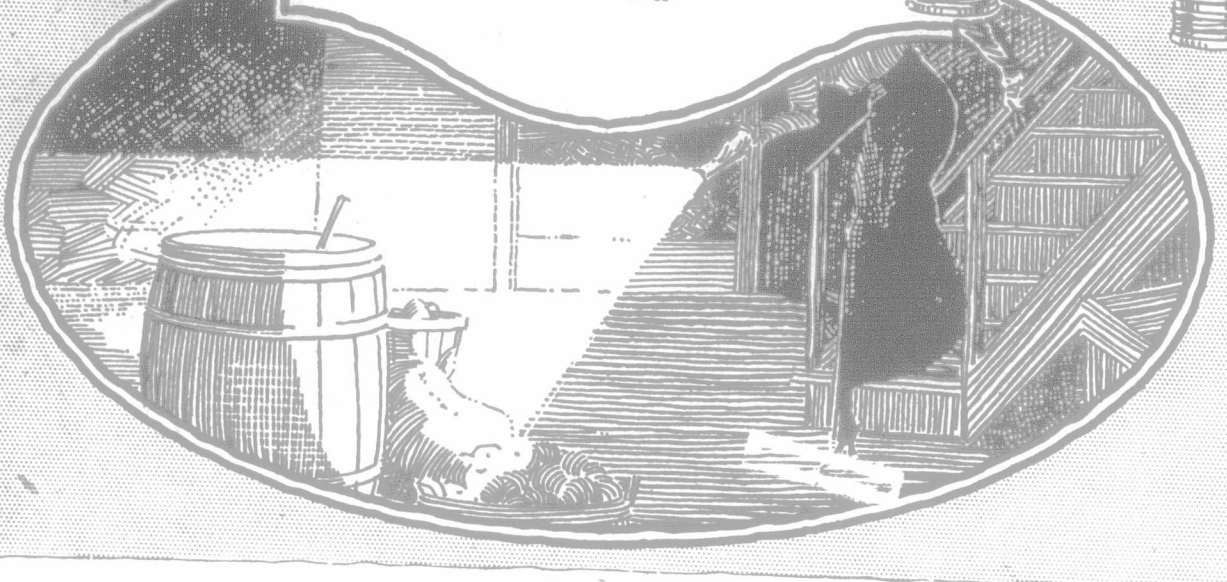
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Special lines of spike tooth and spring tooth harrows also supplied for Fordson Tractors. Proper sizes and equipment, and special construction to suit this special work. (1)

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The cow that gets her daily ration of sweet, juicy Ideal Green Feed Silage all winter is "in clover." She will give 25 per cent more milk on such a ration than on dry feed and will come out in the spring in better shape.

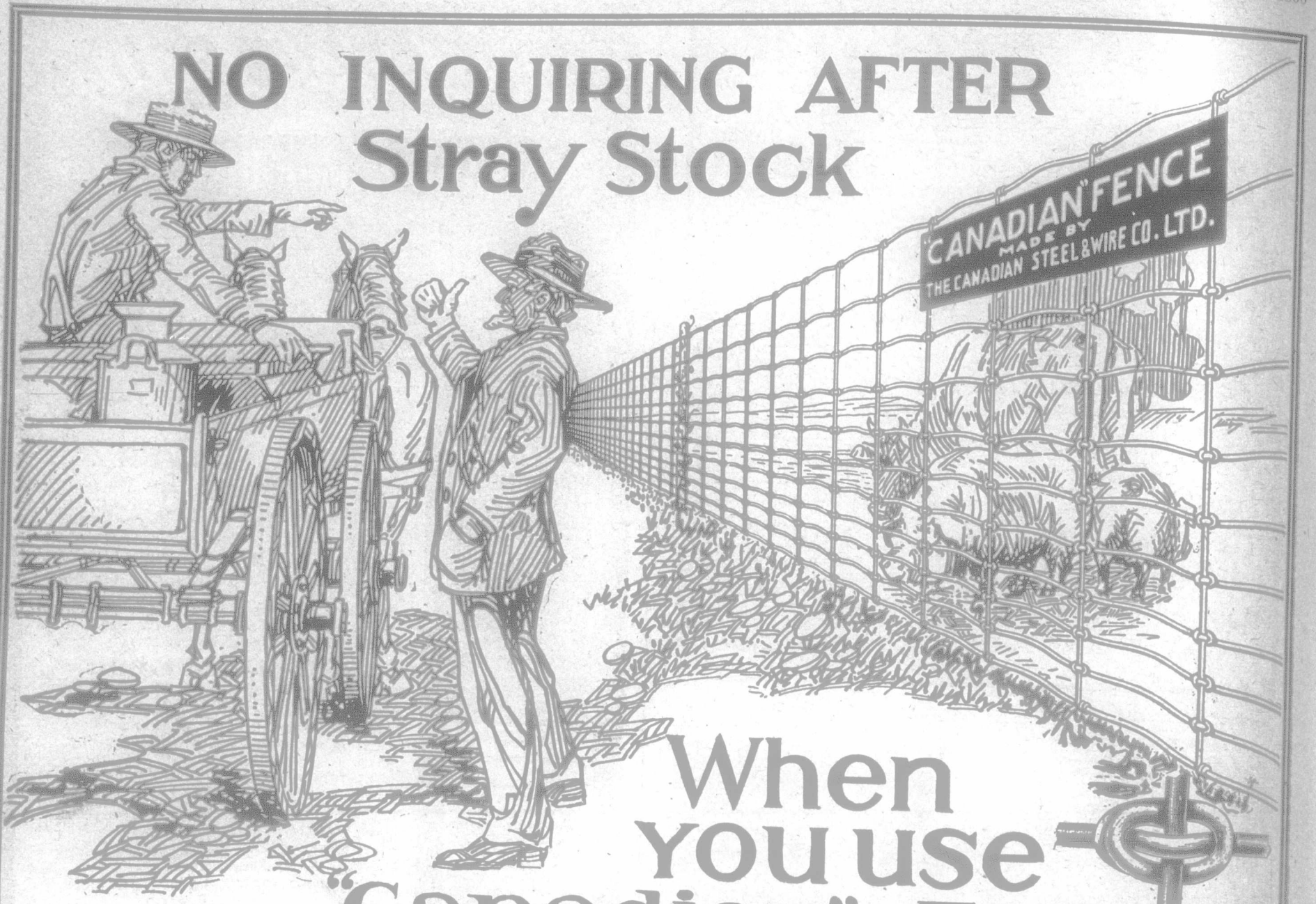
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LIV.

LONDON, ONTARIO, FEBRUARY 6, 1919.

1376

EDITORIAL.

In spite of the open weather, farmers have not found it a favorable winter for getting work done.

Anyone coming to call on "The Lady of the Snows" this winter might find her gowned in light apparel.

The farmer who put in 30 acres of spring wheat two weeks ago in Kent County, Ontario, was a real sport.

Many homes, over which a shadow has been hanging for four years are being brightened by the homecoming of the "boys."

The value of farm crops in Canada last year have been officially estimated at \$1,337,350,870. What other industry in the Dominion has such a record to its credit?

The chances for storing a supply of ice look very poor at time of writing. Even at the "Soo," where at this season of the year 5,000 tons have usually been harvested, not a pound has been put by.

Herbert C. Hoover declares that the accumulation of fats is not sufficient to meet the world's needs. He predicts a demand in excess of the supply as soon as peace is declared and the embargo against enemy countries removed.

If Bolshevik meetings were broken up everywhere as speedily and expeditiously as that one was in Winnipeg by the returned soldiers, Bolshevism would soon vacate. The law is too deliberate and long-suffering to deal with such foul, foreign doctrine.

When labor is asking for a 30-hour week it would be ridiculous to make the days any longer by the re-enactment of the Daylight Saving Act. We have had enough of it, and there is no further need of attempting to save daylight through Government enactment.

A discussion of the corn question is timely now. What variety is best adapted to the district, and how much seed per acre should one plant? When purchasing remember that one bushel will seed from 3 to 4 acres, so the difference in price between good and poor seed does not amount to very much per acre.

Any losses to be incurred through the over-production of fats or other foods in the United States can be borne more easily by that nation than by her European Allies, who have undergone the terrible stress of war since August, 1914. The food was produced in order to defeat a common enemy, and the cost should be distributed accordingly.

Producers of live stock should not endeavor to liquidate their holdings at this time. Everything that can be held should be held, and thus keep the market as firm as possible. It is only folly to endeavor to unload light, unfinished stuff because the movement of this quality will only aggravate the already strained condition of the market. Breeding stock, particularly, should be conserved. The period we are now passing through is extraordinary in that it is bridging the span between war and peace conditions. Heretofore, the European countries were building up their reserves which they will not be required to maintain at war magnitudes. When peace is declared and the law of supply and demand becomes operative there should be ample outlet at remunerative prices for all the live-stock products we can offer. Canadians will be wise to keep their herds and flocks up to a high standard.

More Herdsmen Needed in the Live-Stock Industry.

Live-stock breeders everywhere complain of the great scarcity of reliable herdsmen and now that the war is practically concluded, steps should be taken at once to deal with the situation. The majority of the best herdsmen in Canada have got their training in the hard school of experience, and they are none the worse for it. Many too came to Canada, bringing with them an experience gained in the employ of British breeders and they have "made good." We need more men like them in this country and the breed associations might well devote some of their time and funds to the bringing in of well-trained, competent herdsmen. This line of action should be considered by the associations representing Shorthorns, Herefords, Ayrshires and Jerseys. Men trained in the management of Scottish dairy herds would find plenty of employment and opportunities in this country while those whose experience has been with beef herds in either England or Scotland would find Canada ready to receive them. The Secretaries of the associations mentioned might well look into this matter and take such action as will bring about a solution of the problem.

The animal husbandry departments of our various agricultural colleges also have a splendid opportunity in this regard to serve the live-stock industry. It is time now that courses at these institutions were scheduled for the training of herdsmen. The Agricultural College at Ames, Iowa, has already provided for such courses, and the need is correspondingly as great here.

The success of any herd depends to a very large extent on the care and attention it receives. Pure-bred herds and flocks require more than ordinary management, and a sufficient number of good herdsmen and shepherds would be a great boon to the live-stock industry.

The Attitude of "The Farmer's Advocate."

Some members of the United Farmers of Ontario have said in personal conversation, and have expressed themselves in correspondence, that they do not understand the attitude of "The Farmer's Advocate" in regard to that organization. We are inclined to believe that they do not know "The Farmer's Advocate" as well as the majority of its readers, and when any suggestions or criticisms are offered they jump at once to the conclusion that "The Farmer's Advocate" is not in sympathy with the movement. Nothing could be further from the truth, and in this era of organization when the people, hitherto disunited, are coming together in a common cause nothing would be more harmful than a misunderstanding between those forces working towards the same goal. Anyone who has read carefully and knows the policy of "The Farmer's Advocate" is well aware where it stands in regard to farmers' organization. For half a century it has exhorted its readers to band together for their common good, and still further protect the agricultural industry by electing farmers to represent rural ridings in the Legislatures and the House of Commons. This doctrine has been preached in season and out of season for almost fifty years, and now the converts are becoming sufficiently numerous to apply the teaching with favorable results. Long before many of those now active in the field of co-operation were out of short trousers, "The Farmer's Advocate" was proclaiming the advantages of unity amongst farmers, and urging upon them the necessity of getting together for their common welfare. In the October issue of 1871, almost forty-eight years ago, there appeared an editorial entitled "Co-operation Amongst Farmers," from which we desire to quote parts because the article, in full, is too long to reproduce: "Farmers need a little better understanding of the

advantages to be derived from co-operating with one another. Farmers' clubs should be organized this fall in every ward or section of each township. Efforts should be made to counteract the doings of the speculators and middlemen in forming combinations to cheat the hard-working producer out of a portion of his earnings for their own benefit, by working into each other's hands to lower prices on local markets, in order that they may sell at a heavy margin on more distant ones. . . . Discussions of a general nature should take place, bearing upon all that is likely to affect the farmer's interests. We believe, that by a proper system of co-operation and unity of interests, farmers might be greatly benefited in every way."

The foregoing has always been a plank in "The Farmer's Advocate" platform. In our present-day efforts for reform we are championing nothing new, since for several decades our editorial columns have expounded the gospel of co-operation and urged its readers to espouse that cause.

Similarly "The Farmer's Advocate" has always recommended that agriculturists be elected to represent rural constituencies, and in this connection we desire to quote from an editorial which appeared in the January issue, 1871:

"We have previously recommended farmers to vote for agriculturists—not mere pretenders, whose main desire is to obtain some fat berth, but men who really depend on agriculture as their mainstay. . . . Politics, the Pulpit, the Sword, the Law and the Railroad have each its interests represented before the farmer, and they will all fatten, while the farmer may starve unless he adopt this method."

Hundreds of similar illustrations of our policy could be cited, but the foregoing are sufficient to explain the attitude which has characterized "The Farmer's Advocate" for fifty years; from it we have never swerved.

We have criticized some features of the U. F. O. with the hope of strengthening it and making it more universally popular amongst the farmers of Ontario. We did not approve of the way things were cut and dried before the organization meeting in March, 1914, and we said so. Furthermore, we were of the opinion that the various branches of Ontario agriculture were not represented as they should be in the U. F. O. . . . More than once we have suggested through these columns that the U. F. O. endeavor to get in the big men representative of fruit growing, dairying, the live-stock interests and the various branches of the industry. To us the United Farmers of Ontario still shows a weakness in this regard. We have pointed out the necessity for big men to lead the organization through the growing and critical period of its life, and this need has not yet been met. We feel it our duty also to condemn the manner in which the officers were elected at the last annual convention. When the meeting was asked to nominate members for the Presidency one delegate, quite in order, nominated Mr. Halbert, but before he had time to regain his seat the President of the United Farmers' Co-operative Company moved that nominations close, thus blocking the suggestion of any further names. We are offering no criticism of the choice for President, but that way of conducting elections is not characteristic of a democratic organization such as the U. F. O. professes to be. Furthermore, we consider the persistent campaign conducted by the U. F. O. against the Agricultural Representatives in the Province of Ontario as altogether unwise, unjust and uncalled for. The Agricultural Representatives have done, and are doing a good work. More than that, the Representatives as a body would be of invaluable assistance to the U. F. O., if given a chance. They are organizers, and a great many farmers' clubs now affiliated with the United Farmers of Ontario owe their inception to Agricultural Representatives. We would like to see the U. F. O. adopt a saner attitude in regard to these men who are devoting their lives to the

The Farmer's Advocate and Home Magazine.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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JOHN WELD, Manager.

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 2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries, 12s. in advance.
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upbuilding of agriculture. We realize that the U. F. O. has enemies, and a great many obstacles will be cast in its way by those who would rejoice in its downfall. However, every man's hand is not against them, and the right kind of an organization will never be built up through an endeavor to discredit constituted authority.

We have made these references not to harm the organization, but to help it. Many of the foremost men in the U. F. O. have admitted in conversation, and in correspondence with this office, the justice and reasonableness of our previous criticisms. They have been endorsed by farmers generally.

Our policy embraces a wider and more complete amalgamation than can be carried out in any province. We desire to see the provincial organizations grow strong and unite in a larger Dominion-wide union, made up of the organized provincial units. Then the Canadian Council of Agriculture, the Canadian National Live Stock Council, the National Dairy Council, the Canadian Co-operative Wool Growers, Ltd., and any other national association of producers can all unite in one strong Supreme Council to speak for the agricultural industry of Canada. This is where we stand; this is our attitude.

The United Farmers of Ontario has made substantial progress, and we are pleased to record here that the last annual convention was an improvement over any of its predecessors. That body of men representing a membership of nearly 25,000 was ample evidence that the farmers of Ontario are awake to their responsibilities, and will see that an effective organization is firmly established in this Province. The United Farmers' Co-operative Company is also gaining in strength and becoming a medium through which the farmers of Ontario can right many wrongs from which they have suffered in the past.

So far as the U. F. O. is concerned, we shall continue to assist it and do all in our power to foster agricultural organization in the Province of Ontario. We will help what we believe to be right, and condemn what we believe to be wrong. This has always been our aim, and readers of "The Farmer's Advocate" know how well the following declaration from the issue of January, 1869, (which we again endorse) has been lived up to:

"In the future we shall not hesitate to speak—as we have hitherto spoken—boldly of what we believe to be

abuses, and if we do not command support, will, at least, endeavor to deserve it. In laboring faithfully for the interests of agriculture, we shall proclaim plain truth without fear or favor, and will never shrink from the post of duty because it is unpopular. We know no compromise with wrong and will vindicate the right without regard to party or high station, with unquailing vigor."

Are Women Dishonest?

BY ALLAN MCDIARMID.

A short time ago I read a letter written by a city business man to the editor of a certain monthly magazine in which he made a statement to the effect that women were less honest than men, and he wanted to know why it was. In support of his insinuation in regard to the honesty of women in general he said that during the last twenty-five years he had lent women money in large and small amounts, altogether about fifteen thousand dollars and not a single cent of this had ever been paid back. His willingness to oblige had been taken advantage of in every case. He gives several instances. One is that of a woman who had lost some valuable papers belonging to her husband and not wishing to have him find out about it she went to this man who is telling the story and asked him to advertise for these papers in his own name. He did so and it cost him two hundred dollars before they were recovered. But not a cent of this amount did he ever get from the woman for whom he did the favor.

He gives another experience. A friend of his was leaving for South America and was advised by this man to have his life insured in favor of his wife and family before going. He was unable to pay the premium but our friend, the business man, advanced the money to the amount of three hundred and forty-five dollars, the amount of the policy being ten thousand. As it happened, this man died while abroad and although he left a letter informing his wife of the amount he owed his friend and of all the circumstances of the case, she refused to pay any of it. She had consulted a lawyer who told her she was not legally bound to pay the money, so that settled the matter for her.

His other experiences with women have been much along the same line. He looked on them all as being honorable and trustworthy, as their standing in the Church and society was as good as the best. He is at a loss to explain the nature of the twist that has been given to their mental and moral make-up to make their course of action possible. In other words, he says women are dishonest but they don't seem to know it.

He concludes by saying that it's very true that if you lend a man money you are apt to lose him as a friend but if you lend a woman money you don't necessarily lose her friendship but you lose your money.

Now this seems to be coming down pretty hard on the poor women. If it is true it comes as something of a surprise to the most of us. We have always been told that woman's moral standards are higher than that of most men and along certain lines we know that this is true. Such habits as drinking, smoking, swearing and gambling, for instance, are certainly less common among the "female of the species" than among the opposite sex. But this question of honesty might be another matter. It's something that we haven't given much attention to. We have heard of a certain farmer's wife who filled the first few layers of the egg-crate she was going to take to town with eggs that had failed to develop into chickens and of the other one who put salt into the butter she was selling until it was just about "half and half." And of still another case of the kind where mill-teeth were found in dressed turkeys. These things look bad for the woman's side of the argument, but, of course, there's always "two sides to the story."

As far as our own experience goes we are inclined to think we would, on the whole, rather do business with women than with men, especially where the woman has had to shoulder the responsibility of carrying on, say the business of a farm, on her own account. If she has to borrow from you she is generally very prompt about returning the article, or whatever it may be, and any little buying and selling transactions are always carefully kept track of and squared up at the time agreed on. In this respect my experience seems to be somewhat different to that of our friend the business man, whom we quoted at the beginning of this article.

On the whole I'm inclined to think there isn't so very much difference after all, between men and women in this matter of honesty. It's partly a case of training in early life or of the development of commonsense later on. Any person with brains enough to enable them to profit by experience generally gets a good many lessons in the course of a life-time on the value of square dealing and on the folly of crookedness. Admitting this we might go on and say that perhaps this is the secret of the reason for woman's undeveloped sense of honor, if it is comparatively undeveloped. Her brain being smaller than that of man and consequently less capable of grasping the truth in life's object lessons, she has naturally failed to grasp the vital importance of absolute honesty in transactions of any kind, whatsoever.

Taking aside, is there really a keener sense of honor among men than among women? Have women failed to develop the strength of character that would put them on an equal footing, morally and mentally, with the opposites?

One of the old sages, to whom has been attributed

a good many things worth saying gives expression to his idea on the question this way; "I will not affirm that women have no character; rather I would say, they have a new one every day."

Nature's Diary.

A. B. KLUGH, M. A.

The Moose—(Continued).

When the snows melt the Moose family which has spent the winter in the "yard" breaks up. The bull may have travelled a dozen miles or so in seeking a mate in the fall, but in the spring he returns to his own range. The cow is accompanied by her calf, or calves, for some weeks, but leaves them just before the birth of her new babies. A young cow produces one calf the first time, the older cows two and sometimes three. The mother keeps her babies hidden away in a thicket for a few days, visiting them two or three times a day, after which time they follow her about.

As the warm weather comes on the Moose are driven out of the thick woods by the flies and the heat, and now gather at the lakes and beside large rivers, where they can enjoy a cool bath, get what breeze is moving, and feed on the lily-pads.

The antlers of the bull begin to grow in April, and in three months they are complete and the velvet begins to shed, showing the white, bony structure beneath. By September they are sunburnt to a deep brown, except the tips, which are white and polished from rubbing them on trees and brush.

Early in September the mating season sets in and the bull devotes all his energies to the seeking of a mate. As he travels about he frequently utters his challenge—a deep long grunt. There are two usual answers to this—the long ringing reply of a cow or another deep grunt like his own. In the case of the latter response there is usually much grunting and manoeuvring before they actually come together. As they approach one another they often express their defiance by slashing the brush with their antlers, and at last they meet with a crash. It is very rarely indeed that one of the combatants is killed or severely wounded and the weaker usually saves himself by flight.

It is at this season that "calling" is used to decoy the bull within shooting distance. There is great diversity of opinion as to the most effective method of calling, some hunters maintaining that the call of the bull should be imitated, while others contend that the imitation of the call of the cow should be used. As a matter of fact it seems as if the cow-call is most effective at the beginning of the mating season, that is before any of the bulls are mated, but that later while they will no longer respond to the cow-call they will still accept the challenge of a rival male.

The bull Moose often makes a "wallow" by digging and pawing up the mud in some thicket, and in this he wallows and plays evidently to his entire satisfaction.

The food of the Moose consists of the twigs and leaves of many hardwoods, their particular favorite being those of the Striped Maple. They also eat grass, sometimes kneeling in eating it but usually cropping it easily if it is high or straddling widely to reach it if it is low. In summer they feed largely on the rhizomes of the water-lily and on other aquatic plants. When feeding on twigs they frequently rear up and ride down a sapling so as to bring the upper branches within reach.

The gait of the Moose is a swinging trot. When travelling rapidly it takes immense strides and appears to be about to break into a gallop at any moment—but never does. It is a strong swimmer, swimming with the head and neck and often part of the shoulders well out of water, and I should estimate its speed in the water at somewhat over three miles per hour. I have seen one swim a river three miles wide and then on being alarmed plunge in and swim back again.

The senses of smell and hearing of the Moose are wonderfully keen, but its sense of sight, like that of most wild animals, seems to be employed mainly for the perception of moving objects. Lockhart records that "They generally lie down with their tails to the windward, trusting to their senses of smelling and hearing to warn them of approaching danger from that quarter; they can use their eyes to warn them of danger to leeward, where hearing, and especially smelling, would be of little use. They also have the remarkable instinct to make a short turn and sleep below the wind of their fresh track, so that anyone following it up is sure to be heard or smelt before he can get within shooting distance."

The Moose is a very important animal to the Indians of the northern woods. Its delicious steaks are their staple food, and its nose is their delicacy. Its hide provides the best clothing and moccasin leather and the webs of their snow-shoes. Its back sinew is their sewing-thread, its horns and bones make tools, and its coarse bristly mane furnishes material for embroidery.

The Moose, while a large and very powerful animal, cannot be regarded as a dangerous one, and the only cases on record of attacks on man are in instances where a hunter has been using the challenge call to decoy the Moose, and has been charged for his pains—a just retribution many of us are inclined to think.

It is always a matter of difficulty to ascertain the age to which a wild animal lives, but the Moose is usually supposed to be in the prime of life at fifteen years and to live some twenty-five years or more.

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THE HORSE.

How Shall We Mate Our Standard Bred Mares?

Notwithstanding the fact that the prospects of breeding light harness horses with profit are not as bright as they were a few years ago, we think that when high-class animals of this category are produced there is yet fair profit in sight for the producer, hence a discussion of the subject may not be considered out of place.

By the word "Standard Bred" when referring to mares, in this article we will include all road-bred mares, but when we use the term in referring to stallions we mean a registered animal, as while all road horses are of composite breed the fact that a stallion is registered in a recognized stud book is a guarantee that he is either produced by registered animals on both sides, or has extreme speed himself or has produced extreme speed. And an unregistered sire of any breed or class should not, and under present conditions cannot legally be used in the stud.

If a man has a mare of this class that is a good representative of a gentleman's road horse; has the size, substance, style, action and necessary speed to make a high-class, light-harness animal, it should not require much consideration to decide the class of sire with which to mate her. He has a typical and valuable mare, and if he decided to breed her he cannot expect to do better than reproduce herself, hence he will select a Standard Bred sire of the same type as the mare. If the breeder is aiming to produce race horses and his mare has sufficient speed at either the trotting or pacing gait to win in good company, he should select a speedy Standard Bred sire to a greater or lesser degree regardless of individuality other than speed. He is breeding for speed, and while he likes size and style combined with it, he will have practically gained his objective if he produces speed.

There are many sections in the Dominion, and individual cases in mostly all sections, where practically all classes of mares have been bred to trotting and pacing sires with the expectation of producing race horses. Failure after failure did not discourage; the fillies were again and again mated with Standard Breds, and still very few race horses were produced; we think we are quite within the mark when we say none, except when the foundation stock on both sides was of good breeding and individuality. A cold-blooded mare, if mated with a Standard Bred may, in rare cases, produce a foal with extreme speed for short distances, but seldom or never a race horse, as the cold blood in his veins is not likely to be accompanied by the courage and staying powers necessary in a campaign.

The consequences of such breeding cannot be other than it is, viz., the presence of many horses, both geldings and mares, and not in rare cases stallions, that have no particular qualifications to make them valuable for any purpose. In many cases they are too small for ordinary road work, much less for reasonably satisfactory service on a farm, and they have not sufficient speed for racing, nor sufficient style and good looks to make them valuable for general road work. Others may have sufficient size, but the infusion of the blood of so many breeds or classes has failed to give them the quality, style, action and speed required, and, while they may be serviceable for ordinary light work on the farm, and give reasonable satisfaction on the road, they are not animals that the market demands; hence, the breeder is not wise to endeavor to produce them. We may be accused of moralizing too much in this article, but now we come to the main point, viz., provided the owners of mares of such types as mentioned decide to breed—what class or breed of sires should he select? No set rule can be laid down. Each mare should be mated according to her individuality. There is no doubt that the idea of breeding some of these mares should be abandoned, unless the owner, after careful consideration, decides that he has reasonable prospects of producing a tolerably good animal, he should abandon the idea of breeding. This applies especially to the undersized mares that possess neither speed, quality nor action. If one of this type should produce a valuable animal by any sire, it should be regarded as an accident, rather than as a result to be expected, and the breeder who persists in endeavoring to improve his class of horses with such dams is doomed to disappointment and financial loss. As in all classes of stock breeding, violent crosses should not be tolerated, hence we may exclude from our consideration all the heavy breeds and crosses.

If the prospective dam of the road horse be small, and at the same time have sufficient style, substance and courage, we think a Hackney stallion of the blocky type and good action should be selected. The mare has not sufficient size to breed to a Thoroughbred, with the expectation of producing a saddle or hunter of reasonable size, neither has she sufficient size to mate successfully with the larger breeds of coach horses, hence there are only two classes to choose from, viz., either a good-sized, strong, good-actioned, stylish Standard Bred, or the sire mentioned, and we think that the prospects would be brighter if she were mated with the Hackney, as he would have a tendency to produce substance and action; while the mare being of good quality, we need not fear its sacrifice, and we may expect to produce a low-set animal with substance, quality and action.

If the prospective dam has the size and quality we desire, but lacks the speed necessary for her class, and we wish to produce a harness animal in which speed is not an essential, we have a choice of sires. We may select a Hackney or one of the heavier coach horses. In such a case we would probably select a good-sized

Hackney with the desired action, as he will be more likely to produce an animal with the flash action desired in the heavy-harness class, but if desirous of producing size, even at the expense of action, a large coach sire should be selected. If we decide to produce a saddler or hunter, which will probably be in greater demand than the harness horse, under present conditions, of course a good large Thoroughbred of good quality should be selected.

If the prospective dam has size, probably action, but is rather coarse, lacks the style and quality we desire, then we have practically no choice of sires. There is but one class of sires that will, with reasonable certainty, produce well out of her, and he is the Thoroughbred. He, on account of his prepotency, which has been assured by centuries of breeding in certain lines, has the power to overcome the lack of quality in the dam,

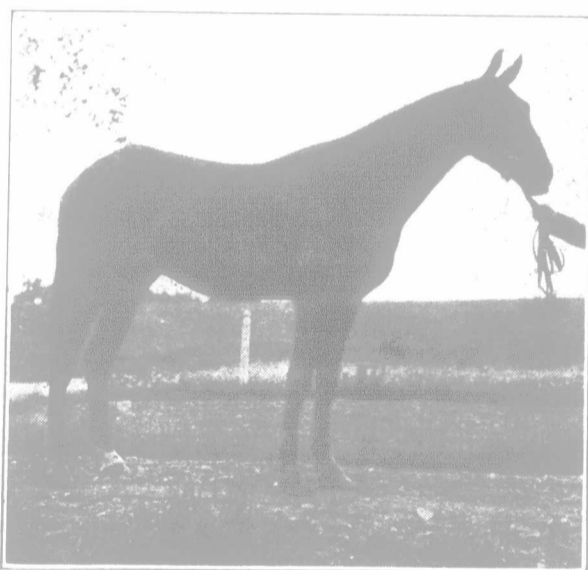


A Middleweight Hunter.

Out of a General-purpose mare and sired by a Thoroughbred.

and to transmit in a marked degree his own characteristics to his progeny. No other breed of stallions will so surely stamp quality on their produce out of coarse mares. The produce of this line of breeding, with few exceptions, are horses that excel under the saddle and give fair service in harness, either heavy or light. They make combination horses—have not speed enough for the ideal road horse, nor action enough for the ideal heavy harness horse, but at the same time go fairly well in either buggy or carriage, and excel as saddlers or hunters.

In the selection of a Thoroughbred to sire our colts, we must not select him simply because he is a "Thoroughbred." We should demand fair size, soundness and



A Heavyweight Hunter.

This horse, like the one above, was a championship winner at the Michigan State Fair, 1918, for Willowbrook Farm, London, Ont.

good temper. On account of the prepotency mentioned he has a strong tendency to transmit to his progeny, both his desirable and undesirable qualities, and we often notice that a Thoroughbred sire that has undesirable qualities, in either conformation or temperament, will transmit them to a much more marked degree than they exist in himself, hence the need of care in the selection of a Thoroughbred sire.

Rather than use an unsatisfactory stallion that may be owned in the neighborhood, farmers should form an association and obtain a premium horse for the season. There are usually enough horsemen in the community who have the same breed of mares to make this system practicable. In many cases one does not like to offend a friend or neighbor who owns a stallion by not patronizing him, but horse breeding has got to a place now where one is not warranted, on such grounds, in using a poor sire. The best are none too good. There are many horses throughout the country worthy of patronage, but there are a few yet which are not of sufficient size and quality to commend them. It is up to farmers to make the choice.

If you have a horse to sell, fit him for the market. Thin horses will not sell to advantage.

LIVE STOCK.

Plenty of straw in the pens will help prevent the pigs from becoming stiff or rheumatic.

Exercise is essential to the development of bone and muscle. Give the growing stock a chance to stretch their legs.

Meats are a staple article of diet. There will always be a demand for them in all but some of the tropical countries.

The farms producing the largest crops to-day are generally found to be those on which the most live stock has been and is kept.

The value of farmyard manure is greater than most people realize, judging by the way it is handled. Drawing it from the stable direct to field and spreading it has been found to be advantageous.

At a sale of Duroc Jerseys, in Mississippi, the sum of \$2,850 was paid for a young sow which was junior champion at the National Swine Show. At Prof. H. W. Mumford's sale, held in December, a sow of this breed brought \$2,225.

Failure to get the young stuff off to a good start is a handicap which stockmen find hard to overcome. Above all things keep the young stock thrifty and hearty. A stunted calf, pig or lamb seldom makes a profitable animal when mature.

Becoming panicky when prices of stock fluctuate, and rushing the nearly-finished stuff on to the market, only accentuates the trouble. Prices are almost bound to lower on a glutted market. Finishing the animals and having shipments coming along throughout the year helps to keep the market steady.

Returns from the crops may be a little slower in coming in when marketed through live stock than when sold direct. Some years marketing the grain direct nets the most cash, but taking one year with another the live stock route is the most profitable, and the system leaves the farm better for succeeding crops.

In discussing the live stock situation, at the Experimental Union, Prof. Toole said: "The greatest need of the present is more good pure-bred sires. Too many otherwise careful farmers are careless about the sires used in their herds and flocks. It should be remembered that a good sire is at least half the herd and a poor one is all of it."

Our English correspondent writes as follows: "Holland's horses, between 1917 and 1918, increased in numbers by 378,294 head, or a 12 per cent. rise. Cattle stocks fell in 1918 by 2,048,872 head, or a drop of 11 per cent. below the 1917 figures. Pigs came down 'wallop' by half, in the year, i. e. 600,133 against 1,185,438 in 1917. What did she do with her 'edible' live stock?"

In many grade herds the dry cows are low in flesh and little or no grain is being fed to put them in good condition. The far too general practice is to carry the dry cows along as cheaply as possible. This is a mistake. A cow that has no meat on her bones when she freshens is not likely to feed her calf very well or to fill a milk pail with the lactic fluid. Feed the cows well and give them a chance.

If the weather is cold when the next sow farrows then the weak pigs may possibly be saved by removing them from the pen for a time and keeping them in a basket in the bottom of which are a couple of hot bricks. When the pigs get thoroughly warmed and are stronger they may be placed with the sow. A cold, damp pen is fatal to new born pigs. A little extra care at the right time may save the litter.

Canadian breeders of Aberdeen-Angus cattle imported a number of high-class "Doddies" from the United States during the year just closed. Some of the best stuff offered by American breeders came to this side of the line, and some of it will undoubtedly be seen at future Canadian exhibitions. J. D. McGregor, Brandon, Man., G. C. Channon, Oakwood, and H. Fraleigh, Forest, were among the largest importers.

One of our correspondents who uses the self-feeder for hogs overcomes the difficulty of feed blocking in the hopper by having three strips on each side of the slope. These strips are fastened at one end with a screw-nail while the other end protrudes about one inch below the opening at the bottom. The strips can be moved fore and back, thus loosening the feed. The pigs soon get used to moving these strips when the feed becomes blocked.

Importance of Live Stock.

Last year when the results of the first farm survey, made by the Ontario Department of Agriculture in Caledon Township, Peel County, were published a table was presented to show the beneficial effect of an improved quality of live stock upon the labor income of the farmer. For very many years speakers at live stock meetings, exponents of the various breeds of pure-bred cattle, sheep, swine and horses, and the farm press in general, have been emphasizing the profitableness of live stock on the farm. It has been pointed out that live stock is necessary to maintain the fertility of the soil and to enable the owner to market the products of the field at a greater profit. We have been told that when the crops grown on the farm are sold on the market it is usually possible to sell them at a fairly good price and secure some return for the labor spent in growing them. But if in addition to growing these crops the farmer is able to gather about him a considerable number of live stock and feed much of his grain, it can be marketed through the live stock at a double profit.

Experience has shown in many instances that this is true, and gradually an increasing number of men have been shown that live stock is a very important factor in the economy and profit of the farm. It remained, however, for someone to provide definite and actual proof that live stock is of such importance as has been claimed for it, because, while the experience of the best men is usually indicative of what is actually the best way of doing a thing, there are hundreds of people who will never accept what someone else has found to be valuable in one particular instance. The result of these farm surveys, therefore, is to provide this definite information, since a tabulation and analysis of the figures gathered therein brings together the experience of hundred of farmers, which, according to the law of averages, must tell an absolutely straight and truthful story.

The second year's experience with the farm survey in Ontario brings together an additional quota of information, similar to that gathered in Caledon, but from a different section of the province, namely, the County of Oxford. This County is, of course, primarily a dairy county and one of the very best at that, but so far as the influence of live stock is concerned this makes very little difference, except to show that live stock, with dairy cattle predominating, are profitable as well as where some other kind of stock is found most commonly. The accompanying table is the result of a survey of 437 farms in Oxford County, and shows the influence which live stock of varying quality had upon the labor income of the farm owners, as compared with the influence exerted by crops of varying quality. The labor income referred to here means the amount of money which the farmer had received for one year's work of himself, his wife and daughters, and any boy under fourteen years old, or, in fact, anyone who had worked on the farm without a stipulated wage, and who was not old enough or strong enough to demand a man's wages. It has often been argued that it is more profitable to increase the yield and quality of the crops grown, than to increase the numbers and quality of the live stock on the farm, and while undoubtedly both should be improved wherever possible, this table shows very clearly that it is easier and quicker to make money by improving the live stock than the crops.

All the figures used in this table are relative, with the exception of the number of farms, which is given only for the purpose of showing that there were about the same number of farms in each group, so that it is quite fair to compare them. The live stock index, or the crop index, refers to the relative position of the live stock or crops on any farm, or group of farms, as compared with the average quality of the live stock or crops on all the farms. Thus we find that both crops and live stock are divided into three groups. There were, for instance, fifty farms where both the crops and the live stock were below the average; forty-five farms where the crops were average and the live stock below the average; fifty-seven farms where the live stock was average but the crops below the average, and thirty-nine farms where both were average, while there were forty farms where both were over 110, or more than ten per cent. above the average.

Now then, we have nothing more to do with the number of farms; all we have to do is to compare the labor income which has been adjusted so that it will actually compare with every other labor income mentioned in the table, and the average live stock index of the farms in the same group. Let us start with the farms where the live stock and crops are both below the average, and we find that the adjusted labor income is 47 when the live stock index is 77, or twenty-three per cent. below the average, and the crop index is under 91. When we bring the crops up to the average and the live stock remains the same (77), the labor income jumps to 73, and when we bring the crops above the average while the live stock drops a little lower we find that in this particular case, including thirty-four farms, the labor income drops to 58—but it is still higher, of course, than where the crops were poor. So far we have seen that good crops do improve the labor income, but beginning again in the group where both live stock and crops are poor and looking to the right, we find that if the live stock comes up to the average and the crops remain below the average the labor income jumps to 95, an increase of 38 instead of the 26 which occurred when the crops were brought to the average and the live stock remained poor. If we go farther to the right we find that when the live stock is brought above the average in quality, the labor income rises to 113, a further increase of 18; the crops remaining below the average as before.

The same thing can be worked out by making two different comparisons, in addition to the one we have just completed. We can compare the labor income when the crops are averaged and the live stock improves in quality, with the labor income when the live stock remains average (index 91 to 110) and the crops improve. Then, as a final comparison, we can compare the labor income on the farms where the crop index is over 110, but where the live stock is found to be under average quality, as well as average and more than average, with the three groups to the right, where the live stock is always above the average, but where the crops are variable in quality. This last comparison shows us that improving the crops brings our labor income from 113 to 161, while improving the live stock from 73 per cent. of the average to 131 per cent., brings our labor income from 58 to 161.

Here then we have nine groups of farms, each of them with from thirty to over fifty farms, where the live stock is shown to have a much greater influence on the labor income than the improvement in crops alone. This table can be examined in any way possible with the same results. It is also easy to see, however, that it is profitable to increase both live stock and crops, and the best and the poorest groups in this table show a difference in average labor income as between 161 and 47.

From this table the comparison between price of scoured wool and wool in the grease will be noted. These prices were obtained by the Ontario Sheep Breeders' Association working through the Canadian Co-operative Wool Growers, Ltd. There are some who contend that they received higher prices than those paid by the Association. This may be true, but what would the price of Ontario wool have been had there been no central marketing organization? The Association has helped the grower and will continue to help him. While the 1919 price will, no doubt, be considerably lower than that of 1918, those who deal through the organization can be assured that they will get the very highest price that the market will pay, and that their wool will be handled efficiently at the minimum expense. It is but reasonable that manufacturers will pay the best price when they can buy the different grades in quantity. While the war was on there was an unprecedented demand for these goods. When things return to normal and the supply more nearly equals the demand, those dealing in wool will buy where they can purchase the best quality in quantity. The co-operative marketing plan was a success in war time, it will be an even greater success in times of peace.

The wool is sold according to grade; thus the man with the highest grade of wool receives the highest price. This is an incentive for the greatest care being

Influence of Live Stock on Labor Income.

Crop Index	No. farms	Live Stock Index Under 91			Live Stock Index 91-110			Live Stock Index Over 110		
		No. Farms	Adjusted Labor Income	Live Stock Index	No. Farms	Adjusted Labor Income	Live Stock Index	No. Farms	Adjusted Labor Income	Live Stock Index
Under 91	No. farms.....	50			57			37		
	Adjusted labor income.....		47		95			113		
	Live stock index.....			77			100			127
91-110	No. farms.....	45			39			35		
	Adjusted labor income.....		73		112			154		
	Live stock index.....			77			100			128
Over 110	No. farms.....	34			32			40		
	Adjusted labor income.....		58		108			161		
	Live stock index.....			73			99			131

Co-Operative Marketing of Wool.

The high price of wool and mutton for the past two or three years has been an incentive for farmers to take a new interest in sheep husbandry. New flocks have been started and established flocks have been increased in size. There is no class of animals kept on the farm that will get along with such inexpensive buildings as will sheep. True, they require quarters that are dry, both above and below, and which are free from drafts. They do not want it warm. It does not require much labor to look after a flock of sheep. However, they need a certain amount of care and attention and regular feed and water. The price of wool set a new record in 1918. As to what the price will be this coming spring the future only will reveal. While it cannot be expected that the price will be as high as in 1918, those in a position to fully understand the situation cannot see how wool will go very low for years to come. While the army contracts are reduced, there is the civilian population to cater to. The stocks of woolen goods are low; thus there should be a demand for woolen fabric by civilians, and this will aid in keeping the price at a reasonable level.

R. W. Wade, Secretary of the Ontario Sheep Breeders' Association, stated at the Experimental Union, recently held, that the sheep population for Canada is 2,000,000; for the United States, 50,000,000, and for the Argentine 80,000,000. The wool clip from these countries would be nearly in the same proportion. A large portion of Argentine wool and the bulk of our coarse wool is marketed in the United States. This indicates how important the American market is when regulating the wool prices." The following table, given by Mr. Wade, gives the grades of Ontario wool, the American fixed prices for scoured wool in 1918, average per cent. shrinkage, price in the grease of Ontario wool at Boston, selling price of Ontario wool, and the net price to Ontario wool growers:

Grades of Ontario wool	American fixed price on scoured basis	Estimated average per cent. shrink of Ont. wool	American price per pound at Boston for Ont. grades	Selling price obtained by Ont. wool growers	Net price to Ont. wool growers with 3 1/2% selling charges deducted
Medium Combing.....	\$1.40	47%	74.2 c.	76 1/2 c.	74c.
Medium Clothing.....	1.37	46 1/2%	73.29c.	73 1/2 c.	71c.
Low Medium Combing.....	1.28	44 1/2%	71.04c.	73 1/2 c.	71c.
Low Combing.....	1.17	44%	65.52c.	67 c.	65c.
Coarse Combing.....	1.07	44 1/4%	59.65c.	60 1/2 c.	59c.

taken in handling the sheep. While breed influences the grade of wool, the care which the sheep receive also plays an important part. Keeping the wool clean and handling the sheep to prevent cotting will aid in improving the grade.

The shepherd can do a good deal to improve the grade. Once the fleece becomes filled with chaff, seeds, burrs or dirt it is almost impossible to clean it. Carefulness in feeding will go a long way towards preventing the fleece becoming dirty. The sloping rack, wide at top and narrow at bottom, invariably causes the wool around the neck to become filled with chaff and dirt. The racks should be arranged so as to avoid having to carry hay across the pen. Care of the sheep while the wool is growing, and then shearing and handling the fleece properly will aid in securing the top grade, and consequently the top price.

Victoria and Essex Hogs.

For a number of weeks past we have been giving a brief history of our more important breeds of swine. We have come almost to the end of the list. There are two breeds which we have not mentioned; they are the Victoria and the Essex. Neither of these breeds is particularly well known in Canada. The Victoria originated in the United States. The blood of Poland China, Berkshire and Chester White is combined in this breed, and by careful selection breeders have secured a fairly definite type. At a swine breeders' meeting in Indianapolis in the early seventies the committee's report commending the Victoria breed was approved. It was stated that pigs of this breed, if pure, should have a direct descent from a sow named Victoria. Undoubtedly this is where the breed got its name. Prof. Plumb, in "Types and Breeds of Farm Animals," describes the Victoria breed as follows: "The head is moderately broad, the face has a medium dish, the ear is small to medium in size and carried erect; the body is broad and

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receives the highest
greatest care being

Stock Index Over 110	Adjusted Labor Income	Live Stock Index
113		127
154		128
161		131

breed influences
sheep receive also
the wool clean and
will aid in improv-
improve the grade.
chaff, seeds, burrs
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Hogs.
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Net price to Ont. wool growers with 3 1/4% selling charges deducted
74c.
71c.
71c.
65c.
59c.

deep; the back level and the tail set on at a line nearly on a level with the back; the shoulders and hams carry considerable thickness and fullness, and the length and depth of side meat is very good. The length of leg is only moderate and the quality of bone and hair is fair." The breed is white in color, and mature stock will weigh around five hundred pounds. The quality of the pork compares favorably with other breeds. It is adapted to districts where plenty of feed is available. The breed has not been used extensively and its scope is limited. Other breeds which have become firmly established equal or surpass the Victoria as a commercial hog. Some claim that it is not so susceptible to skin disease as other white breeds. We do not remember having seen the breed at any of our Canadian shows.

The Essex breed originated in Essex County, England. The native type was a mixed color, flat-ribbed and rather coarse in bone. By selection and crossing with breeds of a black color, the white was entirely removed. The coarseness was to a large extent eliminated and the quality improved. The breed was first introduced into America early in the nineteenth century. It is small as compared with the Poland China, and it is not quite so well suited to serve conditions as some of the other breeds. Its early maturing quality is a factor in its favor. Essex pigs make satisfactory gains and produce meat of excellent flavor. The tendency to produce quite a large proportion of fat to lean is somewhat against it. The breed is prolific. Prof. Plumb describes them as "black in color, the head rather short, the face slightly dished, forehead broad, ears small, fine and carried erect; the jaw rather broad and full, the neck is short, the back very broad and somewhat short and strongly carried, while the sides are deep and short. The shoulders are well laid and thickly fleshed and the hams are thick and deep. The legs which tend to be rather short show bone of fine quality. In form the Essex is distinctly of the thick-fleshed, fat, chunky sort, and perhaps no other breed in England has been fattened to so high a degree." We believe that one or two herds of this breed have at one time or another been kept in Ontario.

1918 Market Receipts and Prices.

The summary of the 1918 Market Reports as issued by the Live Stock Branch Markets Intelligence Division and the comparison of receipts for the past three years from the principal markets give some interesting figures. In 1918, 302,856 cattle passed through the Toronto Union Stock Yards. This was about 10,000 more than in 1917 and nearly 33,000 more than in 1916. The top price for 1,200-lb. steers in 1916 was \$10.50; the next year it jumped to \$12.50 and in 1918 it reached \$16.50. In 1918 receipts there were but 7,188 heavy finished steers. There were 23,360 good steers weighing from 1,000 to 1,200 lbs. Good steers from 700 to 1,000 lbs. totalled 47,315, and good heifers numbered 24,899, at an average price of \$12.40. This is a large number of heifers to be passing through one market on the way to the shambles in a single year, especially at a time when there is a call for breeding stock. Good and common cows totalled over 60,000, and canners and cutters, 28,468. Veal calves numbered 53,576.

The hog receipts at the Union Stock Yards were considerably less than in 1917, the number 363,524, as compared with 445,312 in 1917, and 527,489 in 1916. Judging from these figures there must be a large number of hogs still in the country, if, as reports indicated, there was an increase of thirty per cent. in the number of pigs farrowed last spring. The top price for selects went from \$13.25 in 1916 to \$21.25 in 1918. The grades, as given by the Live Stock Branch, Markets Intelligence Division, for the hogs received on the Toronto market in 1918 are as follows: Selects, 332,890; heavies, 1,040 lights, 11,564; sows, 10,142; stags, 329; thus it will be seen that a vast majority of the hogs produced on Ontario farms passed into the top grade.

The 1918 receipts of sheep on the Toronto market were 169,420, which was several thousand higher than either of the past two years. This number was made up of 136,494 good lambs, the remainder being common lambs and heavy, light and common sheep. Toronto is the largest market for cattle, hogs and sheep, but

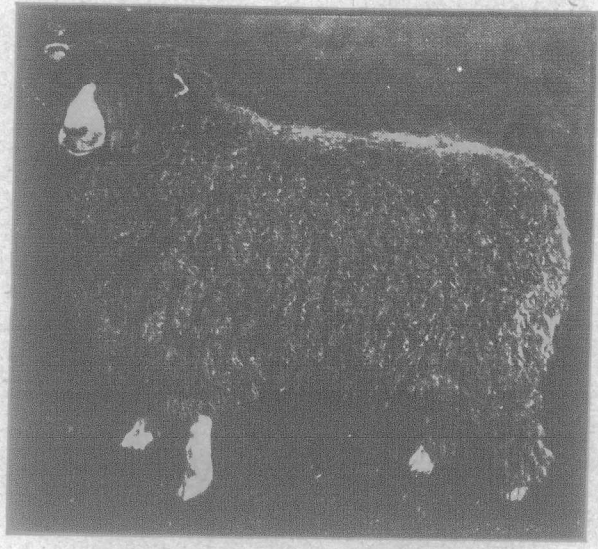
is surpassed by Montreal in the receipts of calves. Winnipeg is a close second to Toronto in the receipts of cattle and hogs, with Calgary third in both these classes of stock.

Community Breeding—A Means to An End.

EDITOR "THE FARMER'S ADVOCATE":

The great war now ended has wrought havoc in the breeding stocks of Europe to a far greater extent than most of us know anything about. Necessity forced the slaughter of much of the live stock which hitherto was kept for breeding purposes, and which, as such, formed the source of supply for the newer, less-developed countries. With the advent of prospective peace, the world's greatest breeding ground finds itself sorely stripped of her good cattle. And so much so, that Europe will have to depend to some extent upon the American continent for the necessary high-class blood to lay a foundation for breeding work in years to come. This is our opportunity, and it is right now that Canadian breeders should be perfecting plans by which we can meet what is certain to be a steady demand.

It is the well-established breeder whose standard of stock is high, and whose financial resources are adequate for the pursuance of breeding live stock of the desired type, that will reap the benefits of the overseas demand.



Lincoln Ram.

Sold for 700 guineas in an English sale.

There are, however, a comparatively small number of breeders in our Dominion to-day who find themselves so situated. The matter thus evolves itself into one in which the less fortunate breeder must take a greater part.

There are in this land of ours a vast number of breeders whose attaining of success is largely barred by the inadequate source of capital at their disposal. Possessed of the essential knowledge of breeding and feeding management yet lacking the financial backing, the majority of our stockmen find themselves handicapped. We must, therefore, adopt a system of breeding which will "let in" the majority and thus involve a much greater number in the building up of a live-stock industry, appropriate in size and strength, to cater to the needs of Britain and the European countries.

The entire country believes that, as regards live stock, we will do wisely to increase our productive capacity to the fullest possible extent. To do this it is the writer's opinion that community breeding, often times spoken of, must become a reality. The purpose of community breeding is two fold. First, to improve the stock kept by the use of pure-bred sires of proven merit, and the keeping of pure-bred females as far as possible. Second, to put the live-stock business on a more substantial basis through co-operation. Local community breeders' associations formed throughout our province

can do much to establish a live-stock industry such as must materialize if we expect to take full advantage of the opportunity extended to Canada.

An association enables the breeders to co-operate in buying. A group of farmers can buy a sire in partnership and use him collectively. This is a great economy over the plan of several farmers buying their individual sires and using them on only ten or fifteen females. Moreover, if a large number of stock is to be bought for the community, a saving can be effected by having a representative committee purchase the animal. A body of people in the pursuit of the same end can profit not only by their own experiences, but also in the experiences of their associates. However well informed a man may be he is continually meeting problems that puzzle him. He needs to exchange views with his fellowmen to enlarge his perspective. Community breeding then has its educational value.

In the consideration of such a subject as community breeding, it is well for us to note what has actually been done by such a system. One of the very best illustrations of community breeding is to be seen in the Island of Jersey. In the year 1789 the dairy farmers of Jersey succeeded in passing a law which very explicitly prohibited the importation of any cattle whatsoever for breeding purposes. After 1789 the cattle which were sent to the Island were sent for beef purposes only. They had to be slaughtered within a few days after reaching the Island. What has been the result of such a consistent effort in community breeding? One result has been a steady demand for these community-bred cattle. Cattle breeders from all over the world, interested in dairy cattle, procured their stock from the Island.

Other breeds of live stock owe their origin and development to community breeding. For instance, in the Province of La Perche, in France, the community took an interest in the breeding of a certain type of horse. The famous Percheron, which resulted from this community breeding, is still eagerly sought by buyers from other countries.

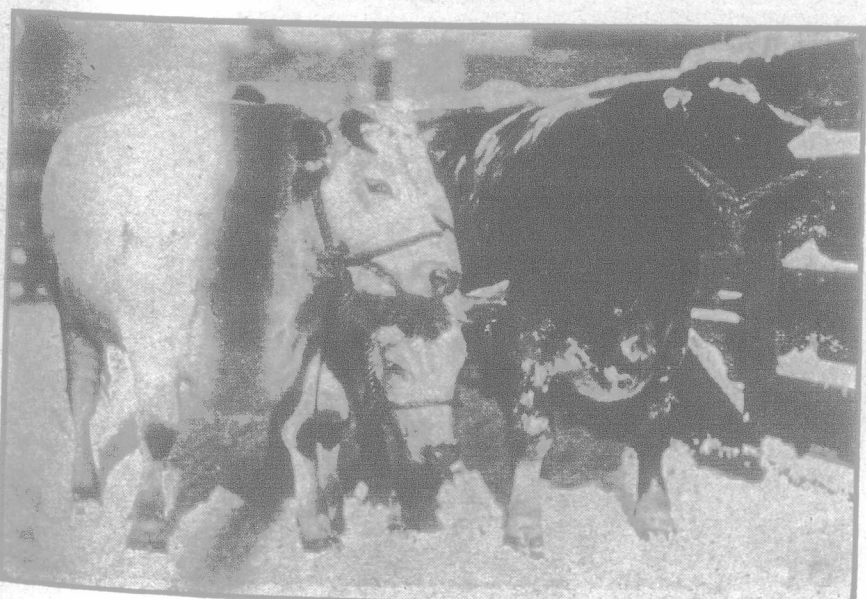
The Canada Food Board is quoted as saying: "By a careful study of figures and comparisons the enormous possibility for development of the Canadian live-stock industry on a broader basis is apparent. With the re-establishment of normal commercial communications with Europe on the restoration of peace, a tremendous demand upon the live-stock industry of this country will have to be anticipated and prepared for. Increased production of live stock is of vital importance to Canada and her future, and is the most valuable reconstruction work that can be done." Britain in 1917 is shown to have imported 1,077,154,000 lbs. of beef and 1,261,082,032 lbs. of hog products. Canada's contribution towards this demand was 29,580,000 lbs. of beef and 130,304,900 lbs. of hog products. This is surely an opportunity which we cannot afford to ignore or to waste.

Canada may easily place herself in the way of attaining a powerful place in the export live-stock business. But this we cannot achieve by haphazard breeding, which largely accounts for inferior and unprofitable stock. No matter in what industry an individual or country may be engaged, the producer of an article of quality, finish and uniformity is the one that readily finds a market at top prices. To produce the uniform, high quality carcass, or stock to provide for fundamental breeding purposes, we must use the sires and females that will "deliver the goods." To do this, and to do it throughout a widespread area, as would be consistent with the great overseas demand, we must enlist the services of the fellow "who would but can't." The farmers who would like to but cannot produce more stock of superior quality, due to financial limitations, must help each other. They must get together. Some form of community breeding must be adopted. Energetic work directed along these lines will not only bring substantial personal rewards, but will constitute an important factor in placing the live-stock production and trade of Canada on a sound and permanent basis.

Wellington Co., Ont.

BERT MAXWELL.

The season for scratches and leg trouble is approaching. Prevention is better than cure.



Grand Champion Trio of Steers at Toronto Fat Stock Show.
They weighed 3,840 pounds, and sold for 24 cents per pound.



Herefords.

The late Lord Rhonda's Hereford herd at pasture

THE FARM.

Desirable Characters in Grain Varieties.

The desirable characters of any variety are those that enable it to thrive in the environment in which it is placed, or give it commercial popularity. The undesirable ones are those that prevent it from achieving its best whether on the farm or in the market. According to conditions a desirable character in one locality may be an undesirable one in another.

In any kind of grain, yield is, and always will be, a desirable character, but in many localities the variety must primarily depend on other characters, such as drought resistance, early maturity and tightness of chaff, to give it value. In localities where conditions are less severe, these again may be of actual harm, as a larger yield could be obtained with a variety that was later in maturing, having a loose chaff and being more adapted to a humid climate.

Earliness exceeds yield in importance in all of the northern districts of Canada, and wherever it is a question of maturing grain before the time of frost.

Tightness of chaff in wheat is necessary wherever high winds prevail at the time of ripening as on our prairies. In Eastern Canada, however, where no loss is experienced from winds, and the threshers are not used to threshing tight chaffed wheat, considerable grain may be lost over the rear of the mill.

Varieties that have the ability to resist drought do not, as a rule, succeed where there is an abundance of moisture.

High baking strength is absolutely essential wherever wheat is grown for export, but for domestic use a variety may be grown to advantage that has only moderate baking strength, if it gives a high yield.

Thinness of hull in oats is a desirable character under all conditions. Husklessness in oats is only desirable for a few special purposes. The husk facilitates the commercial handling of the grain and protects the kernel from injury.

Beards on wheat and barley are most undesirable, but in the case of barley it has not as yet been possible to produce a beardless variety giving a yield that will equal the best of the bearded sorts.

Awns in oats are unnecessary, and are not in any way connected with yield.

The color of grain is most important, not that it has any intrinsic value, but because the market demands a certain color of kernel in wheat, oats and barley. This demand has arisen from the association of a certain color with an outstanding variety such as the red color of the Red Fife and Marquis wheats, etc.

Enough has been said to show the fallacy of the idea that any variety of wheat or oats or barley is superior under all conditions, to all other varieties. The truth is that every variety has its limitations, and it is up to the grower to produce a variety which possesses the characters that will enable it to thrive under his conditions. If in doubt, consult the superintendent of your nearest Experimental Station, or write directly to the Dominion Cerealist, Central Experimental Farm, Ottawa, describing your climatic conditions and requesting his advice as to the variety that will succeed best in your locality.—Experimental Farms Notes.

The Art of Plowing.

EDITOR "THE FARMER'S ADVOCATE":

I noticed some discussions in your columns last fall, regarding plowing competitions, which I then made note of and now propose to consider.

Plowing is one of the most necessary accomplishments that a young farmer should endeavor to make himself proficient in. There is nothing more pleasing to a good farmer's eye than a well and neatly-plowed farm. It is also necessary in order to combat successfully that great enemy of good crops—weeds.

We are sometimes advised through your columns that the single-furrow walking plow is much too slow, and should be discarded in favor of two and three-furrow gangs drawn by four horses or a tractor. I would like to say that for the average one-hundred-acre farm in Ontario I believe the single plow has a place and will continue to have a place for time to come. The larger plows are capable of doing good work under ideal conditions, such as level fields, which are free from stone and are laid out so the lands can be of good length; but we know that on most farms Nature did not plan the soil so that even regular fields can be arranged. Then we find that double plows do not work so well on side hills, and to make a presentable job in stony land is impossible. We also find some fields are irregular in shape, thus causing gores in the finishes, an unpleasant condition for large plows. We find that a single-furrow jointer plow, properly handled, will make good work under any of these conditions. However, there is a place for a double plow on most farms to help in preparing land for roots and in after-harvest cultivation of stubble fields; but for the major part of the plowing, a walking plow will be found to make the better work.

Many plowmen are prone to think that to blacken the field constitutes good work. The primary object in plowing is to cut the roots of any weeds and turn the soil over in order to pulverize it. We see that to turn a wider furrow than the width of the share makes it possible for weeds to slip by and continue their existence. It is very necessary to keep your skimmer set at the proper angle to cover any top growth and prevent a row of grass from growing between each

furrow. We might also take a little more pride in making our "fearings" as even and level as possible and also, when practical, plow around the field to make our land-ends conform more with the rest of the field.

Regarding the idea of holding plowing competitions along the same lines as field crop contests, there are several things to be said pro and con. Possibly a few might be enticed to enter a competition of this sort in preference to a contest as held formerly; though it seems to me the practice of holding a field day is much to be preferred. Under the latter plan all competitors compete under similar soil conditions, and are more likely to be satisfied with the judges' decisions. It also tends to create a spirit of sporting rivalry when plowmen are lined up along side each other. Besides, we have the additional advantage of the public being able to examine and compare the work and benefit by the contest, which would be impossible if the work were scattered all over a township. However, we might benefit by some changes in the rules of plowing contests. It is not a real test of plowing ability when a plowman is allowed too much time. Plowing should be done at the rate of at least one acre in ten hours. We might also do without some of the fancy classes that use the old type of sod plow, and are entirely impractical under present-day conditions.

The forming of plowmen's associations in conjunction with agricultural societies would be a step that might well be more common. The importance of plowing among farm work cannot be too strongly emphasized. Wellington Co., Ont. W. MCK.



E. P. Bradt.

Mr. Bradt succeeds W. R. Reek as Secretary for Agriculture for New Brunswick.

How Much Corn Will I Sow?

There is a diversity of opinion as to the amount of corn to sow per acre in order to secure the best results for silage purposes. It is generally conceded that when growing corn for husking purposes, hill planting and having about four stalks to a hill gives the best results. In this case a bushel will plant between four and five acres. When the dent varieties are planted at this rate they produce a coarse stalk, but as a rule there are from one to two ears of corn to the stalk, and in a favorable season this corn will be fairly well matured before the frost arrests development. In some parts of the country corn for silage purposes is being planted quite thickly, feeders preferring the greater bulk to a fair percentage of ears. The thick-sown corn as a rule will produce more tons to the acre that will the thin sown. Some have the idea that to be mature there must be the ripened corn on the stalk. It is possible, however, for the stalk to mature without producing any ears. In the average season very few ears will be produced on thickly sown drilled corn.

The amount to sow per acre will depend upon the use to be made of the corn, the fertility of the soil, the method of planting and the germination of the seed. For silage purposes the aim is to secure as large a bulk of fodder as possible without loss of quality. For four years now experiments have been conducted on Weldwood Farm to ascertain the exact difference in yield and in feeding quality of thick-sown and hill-planted corn. The experiment was conducted on an acre basis in the season of 1918. The field was broken out of sod which had been in pasture for a number of years. A coating of ten tons of manure to the acre was applied in the spring and cultivated in. Southern corn of the Leaming variety was sown in drills thirty-six inches apart, and also in hills thirty-six inches each way. The results bear out the findings of the past three years. The thick-sown corn again gave the largest weight of feed. True, it did not contain the number of ears that were found on the thinner sown part. The field was kept cultivated throughout the season but it was not hoed.

One acre was planted in drills at the rate of fifteen pounds of seed per acre. The same amount was sown in hills on another acre. There was a considerable difference in the yield when it came time to ensile. By the way, the corn was sown on the first day of June and was harvested the second week of October. This piece

had a slight frost before it was cut. Twenty-two rows across the field made an acre. The entire acre was not weighed, but the weight was taken of the corn which grew on two rows, or one-eleventh part of an acre. The yield on the part seeded at fifteen pounds in drills was ten and a half tons. There was an ear or two on practically every stalk and the corn was in the dough stage at the time it was cut. The acre alongside of this was sown at the rate of twenty-eight pounds of seed. There were a few fully formed ears on this corn and a number of nubbins. The yield was eleven tons to the acre. There were practically no ears at all on the lot sown at the rate of forty pounds per acre but there was a considerable difference in the size of the stalks. They were a lot finer but almost as tall as those on the twenty-eight pounds to the acre seeding. The yield of green fodder was twelve and one-quarter tons, thus it will be seen that the yield increased with the rate of seeding.

One acre was sown in hills at the rate of fifteen pounds of seed. This corn grew quite coarse and stood up well, although some of the other corn went down so badly it had to be cut one way only. The grain was in practically the same stage of maturity as that sown at the same rate in drills. The yield, however, was just a few pounds over eight tons to the acre. This is a difference of two and a half tons in favor of drill planting. We cannot account for this difference as the same kind of seed was used, and the soil was practically the same. We did not have the thicker rates of seeding in hills this year. We have not had an opportunity of comparing the feeding value of the different rates of seeding. In 1915 when a chemical analysis was made of the corn as taken from the field, and also of the silage, the thick-sown was almost equal in feeding value to that of the hill planted, but the yield per acre was considerably in favor of the drill-sown corn.

Our large field of corn was sown at the rate of twenty-three pounds to the acre. This gave a particularly uniform stand which did well throughout the entire season. The above figures are the results as we obtained them. The thick seeding in drills gave us the largest weight of feed of the three rates of seeding. The difference in cost of seed between sowing at the rate of twenty-eight and forty pounds per acre would be \$1.07 when the corn cost \$5 per bushel. The heavier seeding, however, gave a ton and a quarter per acre more feed. If silage is worth \$4 per ton this would amount to \$5 worth of feed for the extra \$1.07 spent for seed. There was not so great a difference between the fifteen and twenty-eight per acre seedings. It is quite possible that the same difference would not be obtained on lighter soil. The field on which the experiment was tried was a good clay loam. At the Central Experimental Farm we understand that the corn is sown in drills at the rate of about thirty pounds per acre.

When seed is high in price there is a tendency on the part of too many to seed lightly. There is also a tendency to buy a cheaper grade of seed, regardless of the germinating quality. A few dollars saved in seed has in more than one instance resulted in almost a failure with the crop. No matter what the rate of seeding, it is important that the germination be high. When buying seed it is well to know how it has been handled, and also to know what it will germinate. If the germination is only eighty per cent., a fifth more seed will be necessary than if practically every kernel will grow. As the seed may deteriorate between time of purchase and time of planting it is advisable to test the seed just previous to planting. It is the intention to plant the main field at Weldwood this year in drills at the rate of twenty-eight pounds of seed per acre. A portion of the corn land will be planted at about half this quality per acre and a part at nearly double the amount so as to make further comparison. In both a wet, dry and medium season the drill sown corn, has given a greater weight of feed, than the same rate of seeding in hills, and it is easier on the binder when cutting. As to cultivation it would be an advantage to be able to cultivate both ways if the soil was weedy. However, when thickly sown corn gets a start the weeds have little chance to flourish if the cultivator is properly handled and used regularly.

What Canada's Fields Produced in 1918.

The Dominion Bureau of Statistics has issued the definite estimate of the yield and value of the principal field crops of Canada for 1918 as compared with 1917. The statement is given herewith:

Yield of Field Crops.—The total yield of wheat for Canada in 1918 is returned as 189,301,350 bushels from 17,353,902 sown acres, an average yield per acre of 11 bushels. In 1917 the corresponding figures were 233,742,850 bushels from 14,755,850 acres, a yield per acre of 15¾ bushels. The yield of oats in 1918 was 380,273,500 bushels from 14,790,336 acres, an average of 25¾ bushels per acre, as compared with 403,009,800 bushels from 13,313,400 acres in 1917, an average of 30¼ bushels per acre. Of the remaining grain crops the total yields in 1918, with the figures for 1917 in brackets, were in bushels as follows: Barley, 77,290,240 (55,057,750); rye, 8,496,700 (3,857,200); peas, 3,110,100 (3,026,340); beans, 3,568,380 (1,274,000); buckwheat, 11,428,500 (7,149,400); flax, 5,972,200 (5,934,900); mixed grains, 35,730,309 (16,157,080); corn for husking, 14,214,200 (7,762,700); potatoes, 104,512,700 (79,892,000); turnips, etc., 130,989,600 (63,451,000). Hay and clover, 14,681,400 tons (13,684,700); fodder corn, 4,776,000 tons (2,690,370); sugar beets, 180,000 tons (117,600); alfalfa, 446,400 tons (282,400). The average yields per acre of these crops with last year's averages in brackets were in bushels as follows: Barley, 24½

Twenty-two rows entire acre was not a of the corn which part of an acre. The pounds in drills was ear or two on practice in the dough stage alongside of this was inds of seed. There corn and a number tons to the acre. l on the lot sown at ut there was a con- stalks. They were ose on the twenty- The yield of green ns, thus it will be e rate of seeding. ate of fifteen pounds e and stood up well, ent down so badly grain was in practic- at sown at the same is just a few pounds is a difference of planting. We came kind of seed was same. We did not lls this year. We comparing the feed- seeding. In 1915 of the corn as taken the thick-sown was of the hill planted, bly in favor of the

the rate of twenty- ave a particularly oughout the entire ults as we obtained ave us the largest e of seeding. The ving at the rate of re would be \$1.07 e heavier seeding, er acre more feed. uld amount to \$5 t for seed. There en the fifteen and is quite possible obtained on lighter ent was tried was xperimental Farm n drills at the rate

a tendency on the There is also a seed, regardless of ars saved in seed in almost a failure rate of seeding, be high. When has been handled, te. If the germin- more seed will kernel will grow. time of purchase test the seed just ion to plant the drills at the rate acre. A portion half this quality he amount so as n a wet, dry and s given a greater seeding in hills, cutting. As to e to be able to eedy. However, the weeds have ator is properly

roduced in has issued the of the principal areared with 1917. eld of wheat for 301,350 bushels e yield per acre ing figures were res, a yield per ts in 1918 was res, an average ith 403,009,800 an average of ing grain crops res for 1917 in ley, 77,290,240 peas, 3,110,100 0); buckwheat, 0 (5,934,900); or for husking, 512,700 (79- 51,000). Hay 180,000 tons The average year's averages Barley, 24 1/2

(23); rye, 15 1/4 (18 1/4); peas, 13 1/4 (15 1/4); beans, 15 1/2 (18 1/2); buckwheat, 20 1/4 (18); flax, 5 1/4 (6 1/2); mixed grains, 38 3/4 (32 1/4); corn for husking, 56 1/4 (33); potatoes, 142 1/4 (121 1/4); turnips, mangolds, etc., 381 1/4 (290 3/4); hay and clover, 1.40 ton (1.66); fodder corns, 9 1/2 tons (7.34); sugar beets, 10 (8.40); alfalfa, 2 1/4 tons (2.39).

Wheat, Oats, Barley and Flax in the Prairie Provinces.—The total yields in the three Prairie Provinces in 1918 were: Wheat, 164,436,100 bushels as compared with 211,953,100 bushels in 1917; oats, 222,049,500 bushels as against 254,877,200 bushels; barley, 47,607,400 bushels as against 40,834,100 bushels, and flax, 5,776,000 bushels as against 5,835,900 bushels.

Values of Field Crops.—The average values per bushel of grain crops for Canada in 1918, according to the prices returned crop correspondents of the Dominion Bureau of Statistics, were as follows: Fall wheat, \$2.08 as compared with the same price in 1917; spring wheat, \$2 as against \$1.93; all wheat, \$2 as compared with \$1.94 in 1917; oats, 77 cents as against 69 cents; barley, \$1 against \$1.08; rye, \$1.50 against \$1.62; peas, \$2.54 against \$3.54; beans, \$5.42 against \$7.45; buckwheat, \$1.58 against \$1.46; flax, \$2.65 against \$3.12; mixed grains, \$1.14 against \$1.16, and corn for husking \$1.77 against \$1.84. Of potatoes the price per bushel in 1918 was 98 cents against \$1 in 1917; turnips, etc., were 42 cents against 46 cents; hay and clover, \$17 per ton against \$10.33; fodder corn, \$6.14 per ton against \$5.14; sugar beets, \$10.25 per ton against \$6.75, and alfalfa, \$17.84 per ton against \$11.59. The total farm values for 1918 of the principal field crops are estimated as follows, with the corresponding estimates of 1917 given in brackets: Wheat, \$382,165,700 (\$453,038,600); oats, \$289,404,400 (\$277,065,300); barley, \$77,881,270 (\$59,654,400); rye, \$12,714,400 (\$6,267,200); peas, \$7,907,900 (\$10,724,100); beans, \$19,332,900 (\$9,493,400); buckwheat, \$18,090,600 (\$10,443,400); flax, \$18,641,000 (\$15,737,000); mixed grains, \$40,796,100 (\$18,801,750); corn for husking, \$25,118,800 (\$14,307,200); potatoes, \$102,290,300 (\$90,804,400); turnips, etc., \$54,904,000 (\$29,253,000); hay and clover, \$249,459,300 (\$141,376,700); fodder corn, \$29,335,600 (\$13,834,900); sugar beets, \$1,845,000 (\$793,800); alfalfa, \$7,963,600 (\$3,041,300). The aggregate value of all field crops in 1918 amounted to \$1,337,350,870, as compared with \$1,144,636,450, the figures for 1917 being the highest on record, as were also those of 1917 up to that date.

Leeds County Farmers Do Big Co-Operative Business.

At the Annual Meeting of the Leeds Farmers' Co-operative Limited, held in Athens, on January 28, it was shown by the Manager's report that the Association had done a gross business of \$213,752.42 for the year. This was divided as follows: Eggs, \$42,982.75; dressed poultry, \$14,459.79; feed, seed, etc., \$91,134.52; cattle, sheep, hogs, etc., \$65,155.36. It was also shown that the Association had made a healthy growth. All the original shares of stock had been sold; a new branch had been formed at Lyn and two other branches were being organized.

The Directors were authorized to make arrangements for doubling the capitalization of the Company, and issue 400 new shares.

The Daylight Saving Act came in for much adverse criticism. During the discussion at the meeting, various reasons were advanced for its working to a decided disadvantage to a community.

Opposed to A Navy.

At the regular meeting of the Walsh branch of the U. F. O. on January 15, 1919, it was resolved that—"In view of the colossal war debt which will have to be met in due course and in which burden we are prepared to share cheerfully as Canadian taxpayers; we are unalterably opposed to the Dominion Government making any preparations to construct war ships for the purpose of increasing the strength of our Navy, as Britain at present monumentally dominates the seas; and in addition to Britain's power, Canada has the protection of the great Anglo-Saxon Republic to the South of us, which invincible Democracy still stands for "the Monroe Doctrine," which well-established law prevents any country in America from being attacked by a foreign power; therefore, we feel safe under the protection of Britain and the United States Navies and contend that there is no utility in adding to our present tremendous liabilities for useless expenditure upon naval or other military activities"

It is estimated that 500,000 bushels of oats suitable for seeding purposes may be obtained from Ontario for use in Southern Saskatchewan and Alberta.

AUTOMOBILES, FARM MOTORS AND FARM MACHINERY.

Good Light for the Farm Home.

Good light is something not to be despised by any person wishing to enjoy life to the utmost. It means cheerfulness and comfort. There are a number of lighting systems in use in rural districts. The electric lighting plant is to be found on many farms, the lights in house and barn being run off a storage battery which

is charged by an engine running a dynamo. The writer has had no practical experience with electric lighting, but wishes to give facts regarding the acetylene gas lighting plant installed in the home of A. A. Coon, of Lincoln County. The plant has given faithful service for five years, being installed in January 1914. The carbide generator is a galvanized steel tank about 3 1/2 feet and 2 feet in diameter, holding at its base about 25 gallons of water. The capacity of this model is 25 one-half foot lights, meaning that it will light twenty-five lights at one time that consume one-half of a cubic foot of gas in one hour. The carbide is purchased in steel drums of 100 pounds each. Twenty-five pounds of carbide is placed in the cylinder at the top of the generator and is automatically pushed off into the water by a gravity motor. The operation of the generator is entirely automatic, only a very little gas being in the generator at one time. Gas sufficient for a three-burner gas plate is generated and it is always ready for instant use day or night. Water can be boiled in a very few minutes on this plate. An acetylene iron can also be used at the small cost of about one cent per hour. This is a time and labor saver. It is possible to wire the lighting system so that by pressing a button the gas can be lighted. Mr. Coon's plant cost him about \$175 complete, including fourteen lights and a gas plate. This was five years ago, and in that time there has been no expense except for the carbide. The total cost for light in this home has been about \$50 for the five years. There is no expense for chimneys, mantles or bulbs, as none are used. The carbide residue makes excellent whitewash or fertilizer. An important feature in connection with the acetylene lighting system is that it requires very little attention. It will give light for from four to six weeks without anyone going near the generator, and then it only takes about fifteen minutes to re-charge it. The acetylene light made from calcium carbide is one of the brightest, whitest and softest of artificial lights.

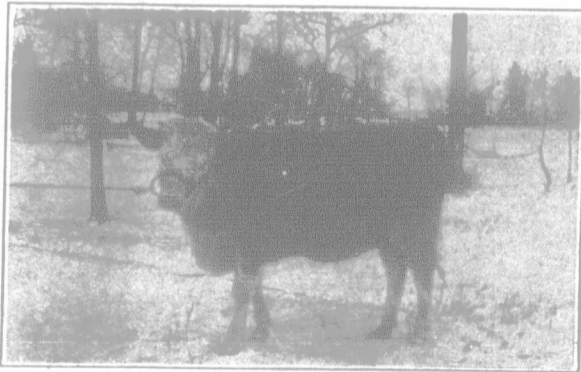
Lincoln Co., Ontario.

C. J. COON.

CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

A Fifteen Year Old Feeder.

The other day we were talking to an Agricultural Representative who began to wax enthusiastic on the subject of "calf clubs" for the boys of his country. "I am through preaching in my country," he said "and I have reached the conclusion that what I have to do is to plan lines of work which will be of direct assistance in putting money in the farmer's pockets." He was very hopeful of creating more interest in pure-bred stock by working through the boys on the farms: those who are old enough to take an interest in and care for some stock of their own. "I have organized one calf club in my country," he said, "and although it has not been working very long I feel that it is one of the very best things I ever did. Just the other day the father of one of the calf club members was in my office and was telling me how enthusiastic his boy was over the calf he got. 'Why', said this man, 'before you organized this club Jack didn't appear to take any interest in the farm at all. He didn't read anything and it was all I could do to get him to feed the stock. Now that



Winner in a Banker's Competition.

he has a pure-bred calf of his own, however, he has become suddenly interested in both breeding and feeding. He reads every bulletin and book he can find on the handling of dairy cattle and even goes out to the mail box and waits for the "Advocate" to come, so that he can find out the best things to do for that calf."

Sometimes boys get a chance to own and care for stock of their own but do not take advantage of it. Evidently, however, Lloyd Copeland, a picture of whose calf is given herewith, is not one of this type. This calf was seven months old and weighed 710 pounds when sold recently in Toronto. It captured the Bankers' prize at the local fair and certainly looks as though it had been well cared for. No doubt it was, because Lloyd, who is fifteen years old, fed and cared for it himself.

Public Speaking and Debating.

BY G. H. UNWIN, O. A. C., GUELPH.

Part V. Faults in Delivery.

Some speakers, otherwise excellent, have a strange narcotic power. After they have been speaking for a few minutes the audience assumes a half-recumbent position, heads droop, and polite hands conceal incipient yawns. Very often, too, this effect has nothing to do with the subject matter, which may be both original and interesting. The reason in such a case is that the speaker pitches his voice in a certain key and retains that key throughout his discourse. After a time, sense, words, and everything else are merged in a drowsy hum, like

"The moan of doves in immemorial elms
And murmuring of innumerable bees."

Curiously enough this habit is frequently put on for the occasion. People whose voices, in ordinary conversation, rise and fall in the most natural way with their changing feelings, when they find themselves on the platform assume a tone of never-varying monotony. I imagine the reason is psychological. Unconsciously the speaker has adopted a "stage manner."

It is obvious that to make a success of speaking a man must be able to modulate his voice. When he is impressing some argument which requires persuasion his tone rises to a higher key than normal and he speaks more rapidly. Again, when giving information in the form of description or figures his voice drops to its normal key and he speaks deliberately and very distinctly for here the details themselves are all-important. Most good speakers raise the voice a little when introducing a new point; and whenever a quotation of any kind is given there should be a change of tone, in order to separate the quoted words from the body of the speech and place them, so to speak, in inverted commas.

Is there any set of rules whereby a man may control the tones of his voice? Certainly, but it is not necessary to learn them formally. Hamlet's advice to the players applies also to speakers. "Hold the mirror up to Nature." My experience has convinced me that all defects may be cured by the application of common-sense—which is a truism no doubt, but one that will bear infinite repetition. Once the reason for a rule is clearly perceived the rule becomes unnecessary. The speaker who is in earnest loses his self-consciousness and becomes natural. He learns almost unconsciously to moderate his voice with the changes of his thought because this is natural to him in private; and practice makes it also natural in public. Most of the errors of the inexperienced speaker come from the unusual position in which he finds himself. They are abnormal. The point to remember is that they may become confirmed habits if not realized soon enough and checked, like weeds, when still young and tender.

Abuse of Pauses.

A judicious use of the pause is of the greatest value to a speaker; its abuse is fatal. You frequently hear the adjective "jerky" applied to a delivery and if you observe the method of the speaker in question you will notice that he makes a pause at regular intervals, thus delivering his sentences in instalments. In the following illustration the logical stopping places are indicated with a perpendicular line; the dashes indicate pauses at wrong points. If any reader thinks this illustration exaggerated let him listen carefully at the next institute meeting.

"It has been said—that charity—begins at home. || The same truth—applies—to education. || The value of —home-training—is obvious | but—it has been neglected. || It has been largely—left—to—the school | to develop —not only the minds and—intelligence of our—children | but also their manners and—character. ||"

Sometimes the awkward interval is filled up with the sound "er", and this unfortunate habit is common with teachers and people accustomed to weigh their words carefully. Once contracted it is exceedingly hard to break.

In order to suggest a remedy it is necessary to theorize a little and to trace effect back to cause. Why does a man stop in the middle of a phrase? Presumably in order to decide upon the next word or series of words. Instead of having the particular thought completed in his brain when he begins his sentence, he has it only partly constructed, and must stop in order to plan the next part. Thus he proceeds spasmodically, anxiety for what is coming paralyzing the expression of what has already come. What at first was a necessity gradually becomes a habit, and long after he is able to translate thought to speech with ease, he persists in the disjointed style.

In accordance with this theory the following remedy suggests itself. Never start a sentence until it is fully formed in the mind. This will occasion trouble, no doubt, but it will force the speaker to think ahead. At all events it is better to pause too long between consecutive thoughts, than to interrupt them at the wrong places. In time the connection between thought and speech will be lubricated and the two processes will become almost simultaneous. It seems to me that this is an important point. The speakers who carry their audiences with them are those who go by the direct route, without stopping at every flag station.

On the other hand certain speakers of great natural fluency make the mistake of rushing on from point to point without pause or breathing space. Listening to such a speaker is like trying to study the country from the windows of an express train. No sooner does one feature strike your eye than it is whisked away, and something quite different is before you. In such a speech there is no time for the succeeding points to

settle in the minds of the audience. The speaker, fully charged and primed with his own subject, forgets that to others his thoughts are new. He forgets also that there are two distinct processes in the audience: the first, hearing what is said, the second, digesting it. For this reason there must be certain points in the speech where a pause of a few seconds is necessary; this serves a double purpose, since it allows the speaker time to prepare for the next point, and gives the audience an opportunity of fixing what has just been said. This matter of pauses is an extremely important one but a great many people neglect it. At first it should be taken up in the preparation of a speech. Later, practice will enable the speaker to pause at the right moments spontaneously. A speech delivered without the proper pauses is like an article written without punctuation marks.

Platform Attitudes.

The attitude of a speaker should be natural, not cultivated. At the same time individual peculiarities which attract too much attention ought to be checked. For instance, some stand on the one leg with the other twined round it. This may be artistic but it is not stimulating. The sight of a figure languidly drooping from the hips like "a lily tired, which lolls upon its stalk," induces a corresponding feeling of weariness in the beholder. On the other hand a firm and vigorous pose carries a promise of interesting things and predisposes an audience to sit up and take notice. It is astonishing what a difference these apparently small details make in the total effect; but it is by such means that spoken thought becomes so much more effective than written or printed thought. Everything about the speaker has its effect upon the listener; voice, attitude, gesture, expression, all should assist the word. How tame and lifeless are the newspaper reports of speeches which we heard yesterday! The personality of the speaker removed, half the meaning is lost.

One very common failing is to let the eyes wander to various parts of the room, to rest now on the ceiling, now on the floor, on the window, the door, in fact anywhere except on the faces in front. Anybody conscious of this habit can overcome it by selecting an individual seated toward the back of the room and talking principally to that person. This focusses the attention of the speaker. For the time being this person represents to him the entire audience in tabloid form. He forgets that he is talking to a crowd, becomes more natural and soon is able to study the effect of what he says. Once arrived at this point he has passed the beginner's stage. This device is suggested as a remedy for the "roving eye", which is extremely common in inexperienced speakers. It has the added advantage of forcing the speaker to hold his chin up and speak to the back of the hall.

The substance of what has been said on delivery is then as follows:

- 1, Articulate clearly; 2, vary the tone; 3, study the effect of pauses; 4, stand naturally and easily; 5, look directly at the audience

THE DAIRY.

Successful Queen, a Maine State Jersey, has just completed her fourth official record, making 17,580 lbs. milk and 847 lbs. fat at the age of 7 years. Her test is 4.8 per cent.

The record price for a Guernsey bull is said to have been broken by the recent sale of Floreham Autocrat for several thousand dollars above the previous record, which was \$10,100.

A cow that will produce 16 tons of milk in one year and 78 tons in about 8 years' time, besides dropping 3 male and 3 female calves, should be able to pay her board on time. But it might be some board bill.

Tilly Alcartra, the California Holstein, has a record at nine years of 33,424.8 lbs. milk and 1,322.25 lbs. butter (1,057.8 lbs. fat), and a total production for six yearly records of 156,776.1 lbs. milk, 6,141.36 lbs. butter.

Within a day or two of each other, the fortieth and forty-first 32-pound-fat Holsteins in the U. S. arrived. They are Rag Apple Aaggie Colantha and Katie Paul Burke, owned in Massachusetts and New York, respectively.

Langwater Phyllis, the new holder of the two-year-old Guernsey record in the U. S. produced 13,288.4 lbs. milk testing 5.62 per cent., making 74,623 lbs. butter-fat. Her test varied from 4.43 per cent. to 6.68 per cent. during the year.

The Canadian Ayrshire Silver Cup Winners for 1918 are announced as follows:

Animal	Age	Milk lbs.	Fat lbs.	Per cent. fat	Days in milk
Lady Jane.....	Mature	19,135	704	3.67	353
Middy.....	4	13,288	533	4.01	365
Anna of Darroch....	3	10,530	427	4.05	364
Snowdrop of Hickory Hill 2nd	2	10,933	449	4.11	363

Cost of Milk Production in Oxford.

"Milk is not selling for as high a price as will recoup the farmer for the cost of production plus a profit. Hogs have gone up more in proportion than the price of a hundred pounds of milk." The above statement was made by A. Leitch, Director of Farm Surveys, Ontario Department of Agriculture, at the recent convention of Eastern Ontario Dairymen in Belleville. Mr. Leitch submitted figures from the recent farm survey made in Oxford County to show that it cost, on the average, \$2.17 to produce 100 pounds of whole milk during the year ending March 1, 1918. As a matter of fact, in some cases the cost of production was much more than this, reaching, on the smaller farms, as high as \$2.70 per 100 lbs. This figure is significant of the true condition of affairs on many so-called dairy farms when the additional fact is disclosed that this milk was sold for \$2.21 per 100 lbs. or 49 cents less than the cost of production.

In most industries the selling price conforms more or less closely to the figure at which the least efficient men in the business can make a living. If this were not at least approximately so, there would be a great many more failures in business than there are. In milk production, two factors appear to be sufficiently prominent to bring about different conditions; namely, the fact that "the farmer can always make a living," and that very few farmers are in a position to know which parts of the farm business are most profitable. The situation is not satisfactory for the producers, many of the men who should be finding this line of work most profitable, finding little or no profit in it—and yet the remedy can only be applied by producers themselves.

The accompanying table shows the cost of production on farms of different sizes, and it is a remarkable fact that only one group received the cost of production plus an additional two per cent. on investment. The receipts per cow did not vary a great deal, but the volume of milk produced seems to increase practically

Cost of Producing Milk.

Size in Acres	No. Farms	Per Cent. Receipts From Milk	Receipts Per Cow	Milk Produced (Cwt.)	Price Received (Cwt.)	Cost Per Cwt.	Cost Plus 2 Per Cent. on Investment	Labor Income
21-45	19	70	\$125	50,300	\$2.21	\$2.70	\$3.04	\$ 494
46-60	24	70	133	68,100	2.19	2.36	2.65	720
61-75	20	63	119	78,600	2.17	2.54	2.87	916
76-90	40	64	122	90,600	2.20	1.94	2.27	1,255
91-110	36	65	123	95,400	2.24	1.95	2.29	1,353
111-135	14	63	125	132,000	2.24	1.81	2.11	1,610

as fast as the cost of production decreases, while the labor income increases in the same ratio. The per cent. of the total revenue received from sale of milk appears also to be important, since additional figures given by Mr. Leitch show that where practically all of the revenue came from milk, the cost per 100 lbs. was \$2.30; where milk made up 70 to 80 per cent. of the revenue the cost was \$2.15; 60 to 70 per cent., \$2.14; 50 to 60 per cent., \$2.08.

About 30 per cent. of this milk went to cheese factories, 40 per cent. to condenseries, 15 per cent. to Toronto, and some to powder plants, creameries and local retail trade. The condenseries paid an average price of \$2.21, the cheese factories \$1.91, and other markets \$2.35, while the average price received was \$2.19½ per hundred pounds, or only 2½ cents more than the average cost of production.

Considerable importance should be attached to the difference in size of farms. The second table points these differences out very clearly in another way than by showing variation in the cost of milk production. The point worthy of the most consideration is not that dairymen should go out and buy up more land, but that it is profitable to clear the land as much as possible, at least until 85 out of every hundred acres are cleared, and preferably more. Real estate capital means the value of the land alone, and this column shows that

(100-Acre Farms) Opportunity for Increasing Size of Farms.

Tillable Area (acres)	No. Farms	Crop Acre (acres)	Real Estate Capital	Live Stock Capital	Labor	Current Expenses	Feed Bought	Labor Income
Under 71	35	52	\$8,219	\$2,386	\$318	\$1,043	\$344	\$ 666
71-80	34	60	9,250	2,765	306	1,096	358	1,116
81-90	37	68	9,543	2,614	347	1,119	348	1,252
91-100	28	67	9,818	3,088	355	1,247	426	1,408

farms with from 71 to 80 acres cleared, for instance, are worth 9,250 in Oxford County as compared with \$8,219 for farms with less than 71 acres of tillable land. It is worthy of notice that not much more labor need be hired on the larger farms, but that more acres of crops are grown and that more feed is bought; also that more capital is invested in live stock. The table shows in brief that many farm businesses can be increased in size without buying more land, and the previous table clearly indicated the value of this from the standpoint of reducing the cost of production.

The nearest competitor to Tilly Alcartra for long distance production is Sophie 19th of Hood Farm, a Jersey that with 75,920.8 lbs. milk, or less than half that of the Holstein, produced 5,217 lbs. butter, or less than 1,000 lbs. below the Black and White.

Suggestions For Creamerymen.

During the past year or two much attention has been given to the quality of Ontario creamery butter in an endeavor to secure a greater degree of uniformity, particularly by the establishment of a butter-grading service. It is probably quite correct to say that there has been an improvement in quality, but the last few years have not seen nearly as much improvement in Ontario butter as in that of the West. The future of the creamery industry in Ontario depends upon the production, in as large a quantity as may be possible, of a high-class graded product. This was the subject discussed by W. G. Medd at the recent convention of Western Ontario Dairymen, and some things that he had to say are worth while thoughts for dairymen and creamerymen interested in the future of the industry in Eastern Canada. The following paragraphs are abstracts from his address:

"We have lost, to some extent, the ideals of the pioneers of the dairy industry in Western Ontario. Some question the value of ideals. They ask, 'What have ideals to do with making butter and selling butter?' the answer is 'everything.' An ideal is a standard of perfection we seek to attain. What then have we lost? We have lost largely an ideal of uniform butter, butter representing the whole product of Ontario creameries. The cheese industry on the other hand has largely attained such an ideal. I question if you could purchase a car of Ontario butter made in two or more factories and get it uniform in every respect. We have also lost to some extent, the ideal of perfection in our finished product. Butter has been easy to sell, we found no trouble to sell butter of any kind; good prices have prevailed. Producers have had greater returns. The high cost of manufacturing during recent years has reduced the profit to the manufacturer. At any rate it has done so in the cream-collecting creameries. This should not prevent thoughtful planning for the future. It should be provocative of the most careful planning that the industry be not handicapped by too cheap

service. What I wish to point out is this, that the ease in which we can sell butter, and the lack of criticism on the market has reacted on the quality of cream received, and on the quality of the output of butter. I am not saying that the quality of Western Ontario butter is bad, not by any means. I think I am safe in saying that we produce more good butter than any section in Canada, excepting perhaps Quebec. There is a lot of good butter made in Western Ontario, and while I say this I want to say also that there are a great many varieties of good butter, (too many), made in Western Ontario.

"What about next year? I know that changes may take place. Even radical changes might come. The United Farmers of Ontario might buy up and take over the whole industry; their ambition just now, I understand, is to get part of it. Why not all? If part is good all must be better.

"Other things might occur that would materially affect our industry. The oleomargarine trade may be permitted to continue business in Canada. This would certainly knock low-grade butter. How it will, in the future, affect first-grade butter is hard to say. We do not know how soon Western agitation will result in tariff changes. We must prepare for anything. One sure thing is that our export trade will increase with the increased production that we count on making, if we are

not awake now the greater competition of butter-producing countries will open our eyes to the necessity of concentrating our efforts on the making of a uniform first-grade butter. Now, what shall we do? I want to state a few things that, to my mind, are essential. I will state them under two heads: 1, manufacture; 2, marketing.

"Under manufacture let me say first we want a better raw material, and to get it I advise more frequent delivery and grading of the cream. These two should go together. It is not just to the producer to grade his cream while leaving it on his hands four, six or ten days at a time. Those farmers who ship to centralizers of sell to buying stations do as they please anyway. It does not matter whether this old sour cream is shipped or collected and is run through a pasteurizer and doped with a neutralizer; it will result only in an advertiser for Ontario butter. The increased cost is the main

creamerymen.

Attention has been given to the creamery butter in an effort to secure uniformity, particularly in the matter of grading service. It is felt that there has been a decline in the quality of butter in the last few years and that the creamery butter is not up to the standard of the production, inasmuch as the creamery butter is made from a high-class cream, as discussed by the Ontario Agricultural College in a report published in the Ontario Agricultural College Bulletin. The creamerymen interested in Ontario are invited to send their names to the Ontario Agricultural College, Ottawa, Ontario, Canada. The Ontario Agricultural College, Ottawa, Ontario, Canada.

reason for not getting a more frequent delivery. The hidebound adherence to that old adage 'Competition is the life of trade,' has to answer for the strangling of a lot of profit to both farmers and factory men.

"Next, let me speak of making the butter. It may be some time before we will have the kind of cream we desire, and in the meantime—and I want to emphasize this—there isn't anything that will help make the kind of butter that will sell on any market as much as pasteurization. I attribute any success I have had in making butter to frequent collection of cream, having it as sweet as possible, and to pasteurization.

"Some Ontario creamerymen have questioned the advisability of heating the cream higher than 150 degrees. I am not going into a scientific discussion of this question; I wish to keep to the practical sides. I may say here, however, that I have been of the opinion for some time that we should have in connection with the dairy industry of this province a department of research, with a bacteriologist and a chemist having their whole time devoted to dairy research. Returning to the question of temperature, I think the temperature recommended (170 degrees for not less than 10 minutes) is a safe one. For the sake of uniformity should we not make an effort to follow closely the recommendation. Last year, 1918, out of 123 factories in Western Ontario only 26 pasteurized. There is surely room for progress. Notwithstanding the excellent instruction given at our dairy schools and by our travelling instructors, I really believe every butter-maker in Western Ontario is a law unto himself. Take the matter of salting, for instance. In a report given last year at Stratford, by Mr. Scott, official grader, the salt content of 241 churnings varied from .9 to 6 per cent., surely variation enough to suit everybody. We have learned that in the butter com-

mandered there was a great variation in color and texture, not to speak of flavor. We cannot expect to take a high place in export trade with such a variety in our butter. "Can we not get a uniform butter throughout Canada by adopting uniform methods of making, by agreeing on a uniform standard and setting ourselves to attain it. One thing that will help considerably in this respect is 'selling on grade.' This brings me to 'marketing.' The one way to sell that is fair to both buyer and seller, is on the graded basis. Some may question the capability of one man, no matter how qualified he may be, to grade butter under all conditions. This question has come to me from both buyers and sellers. Personally, I think one man, the best man for the job, should do the grading. Mistakes may be made. Butter may not turn out as graded. It is only just that in such cases provision be made for re-adjustment I think those cases will be the exception."

Ayrshires Qualify in R.O.P.

A list of Ayrshire cows and heifers that have qualified in the Record of Performance test from December 1, 1918, to January 13, 1919, includes six in the mature class, eight in the four-year-old class, six in three-year-old class and twelve two-year-olds. The mature class is headed by Lady Jane, with 19,135 lbs. of milk testing 3.67 per cent. fat, or a total of 704 lbs. of fat. Only one other cow in the mature class, Humeshaugh Lassie, gave over 9,000 lbs. of milk. Four of the eight cows in the four-year-old class have records of more than 10,000 lbs. and these are headed by Nub of Fairmoor with a record of 12,062 lbs. of milk, 505 lbs. of fat, with a test of 4.18 per cent. The three-year-old class is led by Anna of Dalrock, 10,530 lbs. milk, testing 4.05 per cent. and making 427 lbs. fat. Snowdrop of Hickory Hill 2nd has a long lead in the two-year-old class, with a record of 10,933 lbs. milk and 449 lbs. fat, with a test of 4.11 per cent.

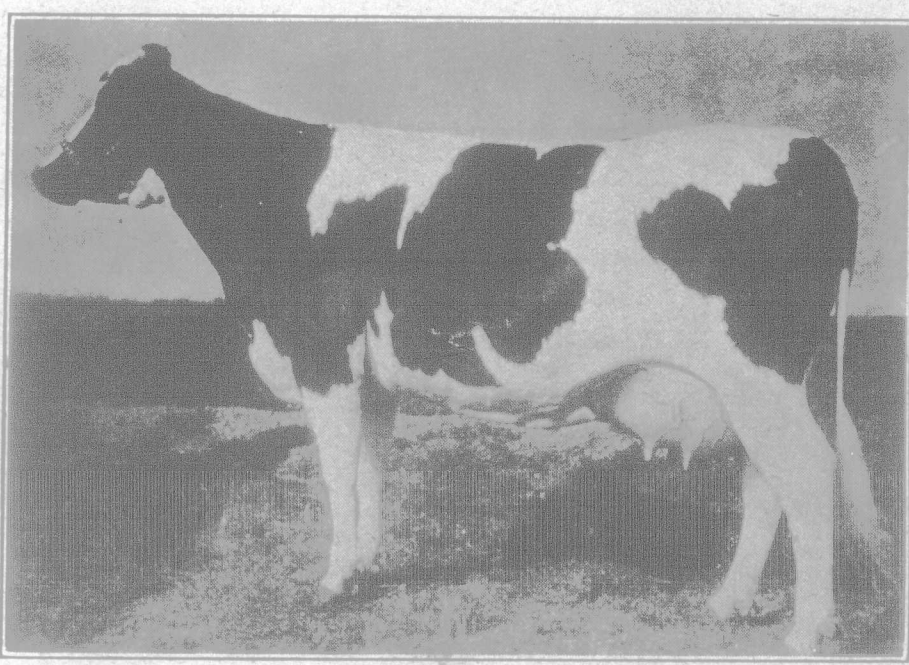
Holstein Records in December.

Twenty-one cows and heifers were admitted to the R. O. P. as the result of their semi-official yearly records. They are led by Kate Casselton De Boer, with 20,903 lbs. milk and 617 lbs. fat. The four-year-old class is headed by Duchess Abbekerk Lulu with 17,758 lbs. milk and 601 lbs. of fat. Colony Cora Cornucopia, the best of seven two-year-olds, make a record of 14,243 lbs. milk and 465 lbs. of fat. In the official records there were sixty-seven Holstein cows and heifers accepted for entry in the Record of Merit. Three new 30-lb. cows were added to the list and the mature class of twelve was headed by Maple Grove Hesseltje De Kol

with a record of 755.9 lbs. of milk, 26.12 lbs. fat, and 32.66 lbs. butter. Helbon Beauty Bonheur comes second, and Fairview Posch third. The latter milked 110.9 lbs. in one day. The junior four-year-olds are headed by Cherry Grove Trina with 30.48 lbs. butter from 590.3 lbs. of milk. There are ten entries in the senior three-year-old class, five among the junior three-year-olds, and fifteen among the senior two-year-olds; the latter being led by Raymondale Ruby with 545.3 lbs. of milk, 19.67 lbs. fat and 24.59 lbs. butter. This record was made at the age of two years, eleven months and twenty-nine days.

The Colorado Agricultural College advises as follows regarding the weaning of calves:

"As soon as a calf will eat, hay or grain should be given. The calves should be fed in stanchions so that each one will get its proper share. Calves not so fastened sometimes learn to suck each other, and this is undesirable. After feeding the milk, place in the manger a box containing a small amount of grain, preferably oats and bran in equal parts, increasing the amount to correspond with the appetite until the animals are large and well developed. All the hay they will eat should be given, using preferably a mixture of clover, or alfalfa, and some kind of grass hay. The feeder must be guided entirely by the condition of the calf in determining how much of any one food shall be given. While ill results may come from feeding too much, the aim should be to feed sufficiently well to secure large daily gains. If properly fed and taken care of, the skim-milk-fed calf should weigh from 500 to 800 pounds at one year of age."



Tilly Alcartra.
California Holstein-Friesian with a record at 9 years of 33,424.8 lbs. milk and 1,322.25 lbs. butter. Photo taken at 5 years of age.

POULTRY.

Watch for disease in the flock.

Variety is the spice of life—its what makes the hens lay too.

If you want eggs next winter hatch the pullets in March or April.

Early hatched pullets usually lay better than hens during winter—remember this when planning for the spring crop of chicks.

Besides having natural fondness for stock it is necessary for the poultryman to be a keen observer and to possess good judgment in the matter of feed.

If the weather is dull and very cold, don't blame yourself unnecessarily because the hens have slackened in egg laying. They can't help it and you can't do much yourself.

The man who can't learn anything more about his business is ready to lay down his earthly burdens. See how many helpful hints you can pick up from others, merely by keeping your eyes open.

The number of working hours a hen can get in between daylight and dark has an influence on egg production. Professor W. R. Graham, O. A. C., Guelph, says, "where the general condition of the housing and feeding are fair to good, it is quite possible that by maintaining fourteen hours of light (in winter) for the hen to eat, a twenty-five per cent. or more increased production may reasonably be expected."

Artificial Lighting.

Some time ago we published results that had been secured at the Ontario Agricultural College with regard to increase in egg production by the use of artificial light to lengthen out the short winter days. There have come to hand some figures as to the result of two years' work at the Central Experimental Farm, Ottawa. This work was conducted during 1916-17 and 1917-18, the first season with two pens of Barred Rock pullets, twenty birds in each pen, and during the season of 1917-18 with two pens of Barred Rock pullets and two pens of Leghorn pullets, twenty birds in each pen. In each pen of twenty birds supplied with light, two tungsten 40-watt lamps were used. Beginning with November when the days became short and continuing until the middle of March when artificial lighting was unnecessary, the light was turned on at six o'clock in the morning and left until daylight, then turned on again in the afternoon before dusk and left until nine o'clock. Commenting on the results from the two seasons' work the Poultry Department of the Central Experimental Farm, writes as follows:

"In the 1916-17 test the light pen laid 1,106 eggs with a total value of \$54.93. The cost of feed was \$22.53, the cost of light \$2.40, a total cost of \$24.73. This gave a balance over cost of feed and light of \$30.20 or a cost per dozen eggs of 26.8 cents. The dark pen laid 636 eggs with a total value of \$29.46; cost of feed was \$21.09. This gave a balance over cost of feed of \$8.37. The cost per dozen eggs was 39.8 cents.

"In 1917-18, the yields were not high in either case, and the total difference in egg yield in the six months was by no means large, but the forty birds with light gave a better revenue than the forty without light. This difference was made up in the time that the eggs were received. Those with the light gave their heaviest yields in December and January, while by far the heaviest months for the Leghorns without light were March and April and for the Rocks January and February.

"The total figures from the two pens with the light were: Number of eggs, 2,470, value \$136.32; cost of feed, \$55.48; cost of light, \$3.20; balance, \$77.64 or a cost of 28.5 cents per dozen. Those without light laid 2,242 eggs; value, \$118.90; cost of feed, \$60.01; balance, \$58.94 and cost of one dozen eggs 32.1 cents. For both years, the light pens laid 3,476 eggs, at a market value of \$191.25. The feed and light cost \$83.41 leaving a balance of \$107.84, or a cost per dozen of 28.7 cents. The dark pens laid 2,878 eggs worth \$148.36. The cost of feed was \$81.10 and the cost of one dozen was 33.8 cents.

"The conclusion may be drawn that for early winter eggs during the short days, the light does increase the egg yield but later in the season the yield is not as heavy as with birds that have not had the light. The advisability of using light, therefore, will depend upon what is wanted. If early winter and high priced eating eggs are the object the lights are an advantage; if eggs during the hatching season are desired, the lights are a disadvantage.

Of Benefit to Poultrymen.

EDITOR "THE FARMER'S ADVOCATE":

Having noticed in a recent number of "The Farmer's Advocate" an article entitled, "Let Us Hear From Farmer's Advocate Readers!" I am hereby obeying the order. The writer of the article said he wished to hear from readers who had never written before, and that the worse the letter the better, so I am now trying my luck.

I thought for some time before I could get a subject which I considered suitable so I have chosen "How I Feed My Hens." My flock consists of eighty-five hens, and they lay nearly as well during the winter months as in the summer, which seems a rare thing to most people that I tell. The way I account for this is the feeding and their surroundings. I find it pays to keep hens clean, with plenty of fresh straw on the floor of the pen. I feed them a gallon and a half of wheat quite early in the morning, which I throw in the straw so the hens will have to work for their feed, as I believe that in cold weather hens have to do some work to keep themselves warm. About nine o'clock every morning I give them a pail of warm bran mash, with some kind of poultry spice well stirred through it. I consider another very important fact is their water. It must be clean and I believe if the water be warmed every morning to take the cold chill off it during the cold weather that the hens will lay far better. I have a large box in their pen in which I keep about four inches of ashes for the hens to dust themselves in, to prevent lice, and I am sure this is a sure preventive from this troublesome pest.

Hoping this is of benefit to every keeper of poultry, and that they will believe in all I have said,
Northumberland Co., Ont. L. R.

One of the most perplexing and interesting problems is the selection or breeding of high egg producers. Results to date at the Ontario Agricultural College would suggest that it is a question of isolation and progeny testing; the isolation of the good laying hen and the sons of the good layers, mating these together and testing the progeny. Later comes the isolation of good breeders of high performers, both male and female. A pullet that lays over 30 eggs in November, December and January, and over 150 eggs for 12 consecutive months, is considered a good layer. Late-hatched pullets that will not lay well during the winter but do well during June, July and August may also be regarded as good layers, the lack of winter eggs being attributable to late hatching.

Plus Cent. Investment	Labor Income
4	\$ 494
5	720
7	916
7	1,255
9	1,353
11	1,610

that this, that the ease of lack of criticism quality of cream output of butter. Western Ontario think I am safe in butter than any Quebec. There ern Ontario, and there are a great many), made in

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ht	Labor Income
4	\$ 666
3	1,116
3	1,252
3	1,408

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irst we want a se more frequent hese two should ncer to grade his , six or ten days o centralizers of ese anyway. It cream is shipped rizer and doped n an advertiser st is the main

HORTICULTURE.

Pruning Problems in Orchard Renovation.

The first problem connected with the pruning of an orchard about to be renovated is to decide what trees to leave and which ones should be cut down. This sometimes offers something of a problem, and the trees still standing must be treated entirely on their merits. The question as to whether or not the vacant places in the orchard should be replanted with young trees



Old Tree Needing Pruning.

immediately crops up. There is, of course, a disadvantage from the standpoint of economy in land in having an orchard with a lot of vacant spaces in it, but on the whole it will usually be found most profitable in the long run, we believe, to refrain from replanting. It is not by any means proven that new trees will thrive as well in soil from which old trees have been taken out, and there is, moreover, the fact to be considered that if the spaces are filled in, the old trees will be done when the young ones are just in their prime. If it happens that the orchard is still quite young, it may pay to plant young trees, but in a very great number of cases it happens that there is a block of the orchard that is so very badly neglected and where the trees are so weak that it will not pay to try and bring them back. In such cases the best policy is to remove this part of the orchard altogether and concentrate one's attention on the remainder. Sometimes, where considerable waste space is probable, other crops may be successfully grown in these spaces and the ground utilized in this manner.

It is rather surprising to what extent a tree may be neglected and in need of care and still permit of successful renovation. Trees with most of the top gone from disease but with the trunk sound, may often have a new top built on them by careful use of the saw, together with cultivation and manure. Trees, too, with big, unhealed wounds in trunk and branches can often be prevented from becoming utterly useless by true surgery. The latter practice, however, is frequently unprofitable, especially if the trunk is very badly decayed. The weakness always remains, and unless one goes to the trouble of very thorough bracing of the main limbs, the first severe storm may break the tree down altogether. A sure sign of remaining vigor in the tree is a vigorous growth of strong suckers near the base of the tree, showing that the roots are in good condition, but that the top of the tree needs attention. All growth of this kind at the base of the tree must be destroyed, however, since it can do no good and may take considerable food from the top of the plant. Suckers growing in the top of the tree can frequently be used to good advantage, since it is often possible to develop them into branches to take the place of the older ones that have become useless through neglect.

One of the first steps in pruning an old tree is to cut out all the dead wood, and if the limbs be large it is a very good thing to make more than one cut for each limb. If a large limb is cut off first about a foot or two from where it should finally be cut, the stub that is left can be cut easily without any danger of splitting the bark or wood. The cut should be made as close to the main limb as possible, preferably just at the shoulder. Some prefer to cut even back of this shoulder, claiming that the wound, although larger, will heal quicker. We prefer, however, to cut into the shoulder leaving a wound with a slight slant. On no account should a stub of any length be left. Following the pruning the larger wounds should all be protected from the weather by means of a coating of some kind. Various materials are recommended from time to time, but there does not seem to be anything better than a mixture of white lead and raw linseed oil. This mixture should have the consistency of fairly thick paint, and a second coat may be of advantage to very large wounds. Injurious materials such as turpentine may kill the growing layer just inside the bark and, for this reason, when using any material it is wise not to paint anything except the

exposed wood where possible to prevent it without taking too much time. Wounds under two inches in diameter should not be painted, as the chances for injury are not great.

After the dead wood is removed the next step is to remove branches that are crossing, the one that is most useful being left and the others removed. There will be several cuts of this type to make in the average tree that has been unpruned for sometime. Next, the watersprouts throughout the tree should receive attention and usually these need thinning out. It is doubtful wisdom, however, to do all the thinning that is necessary the first year. Some authorities agree that no more than twenty-five per cent. of the surplus wood should be removed the first year, and that from three to four years should be taken to whip the tree into shape. There is a danger of extremes in the other direction forcing the tree toward wood production at the expense of fruit.

Every care should be taken to protect the crooked little fruit spurs. Some of these will likely be dead and should, of course, be removed, but all that are alive should be retained and given an opportunity to bear fruit. Later on the poorest can be removed and others developed to take their place. Occasionally, trees are perfectly healthy but are undesirable varieties; these can be worked over to more profitable ones by grafting.

A very common problem met with in renovating old trees is the strengthening of weak crotches. Sometimes the trunk is split, or one of the larger branches may be breaking away from the trunk. If such cases are taken in time they can be treated successfully by means of bolts at least three-quarters of an inch through. A good method has been described as follows where it is desired to brace two large limbs likely to split away at the crotch. About five feet or more above the crotch bore holes through each of the limbs on the same level. Put an eye bolt through each limb and on the outside fit very large washers and nuts. A chain is then passed through the eyes of the two bolts which are then connected together across the open centre of the tree in



Same Tree as Above, Healed Back and Thinned Out.

this manner, the idea of the chain being to prevent the rod from breaking, due to the swaying of the limbs from the wind. It is very poor policy to attempt to brace a tree by means of a chain bound around the trunk. This is a very crude method and inefficient as well as unsightly. Sometimes it is possible to form a natural brace by encouraging one small branch from one of the larger limbs to grow into the other large limb, but this method is easiest followed in the case of a young tree where a crotch has been allowed to develop.

Another problem connected with pruning old trees is with regard to the height of the tree. Many old trees need to be brought down for the sake of convenience and sometimes "de-horning" is necessary to the extent of twelve or fifteen feet. The old type of tree that threw its branches up into the air for thirty or thirty-five feet is no longer in favor, for very obvious reasons, and a tree that is twenty or twenty-five feet high is plenty high enough. De-horning consists chiefly in cutting off the top of the tree, but where much is to be removed it should not all be done the first year. Whenever a branch is cut down it should be cut off just above a branch growing out of the side of the tree, in order to eliminate as much as possible the growth of numerous suckers which is bound to follow. The tree should be left a little higher in the centre than at the outside, but in every case care should be taken that upright branches are cut back to one growing out toward the side.

Lastly, and of great importance in the future fruit production of the tree, as well as from the standpoint of convenience in spraying and harvesting, the final condition of the tree when the pruning is finished and the renovating process has been completed should provide plenty of opportunity for air to circulate through the branches and for sunlight to reach all parts of the tree. This means that branches should not be too numerous and should be evenly spaced in the centre as well as on the outside of the tree. Both centre and outside should be kept from filling up with a dense growth of fine wood, or needless large limbs, and with respect to the latter it is poor policy when pruning at any time to remove a large limb unless it is absolutely necessary, or unless the limb serves no useful purpose whatever.

Temperature, Moisture, Fertility and Plant Diseases.

EDITOR "THE FARMER'S ADVOCATE":

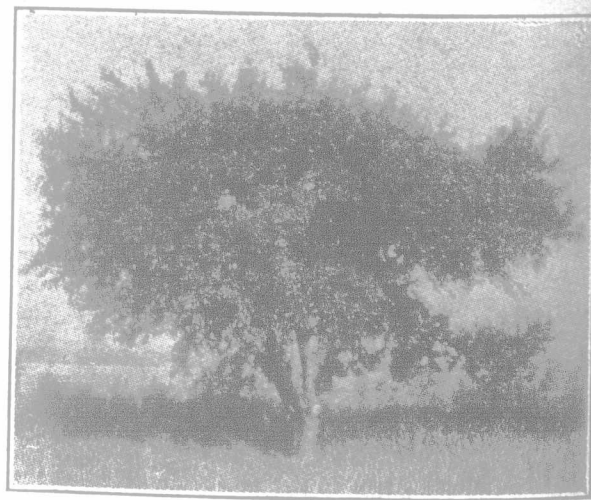
In order to be able to study more satisfactorily this aspect of Vegetable Gardening we must understand more completely that plants and human beings are identical in their resistance to disease. That given certain conditions each can combat successfully any disease. It is well known that where man follows nature's rules that he escapes disease; if he does not he has to pay the penalty. So it would be with plants if we human beings had not chosen to interfere, for our own benefit, with nature's methods. Seeing that we, forcibly, have done this, it is necessary that we try to follow as closely as possible what nature would have done if we are to retain the rightful balance.

If we will recognize each plant as a child we will get off to a good start in our work. Nature gives each plant a definite type of growth with definite food requirements. Do we study each closely enough so that we know exactly what is best for it? Few of us are really making a close study of plant growth and until we do we will make many, and often serious, mistakes.

All plants require, largely, four substances in the soil for their growth: Lime, nitrogen, potash and phosphorus. Of these lime is not so important as the others, being really a soil sweetener and helping to make soluble the other three for plant use. For this reason we will consider only three. As with the human, the plant must have a steady supply of all foods. If some element is lacking it means that the plant will be weakened in growth just so much. Supposing phosphorus were lacking—and it is a well-known fact that it is very deficient in most soils—what will happen? The plant structure would tend to make too rapid a growth and, if any adverse condition set in, disease would very quickly seize the opportunity and the plant. It is claimed to-day that lack of potash in the soil is causing considerable trouble in potato growing and that the cause of our so-called physiological diseases can be traced to its absence. Our experimental work on tomato streak diseases shows very conclusively that an application of acid phosphate will, to a large extent, stay the ravages of this disease. Onion blight starts when the bulb is about $\frac{1}{2}$ grown. Bordeaux mixture has little effect on it. Experiments show it is not from lack of potash and phosphorus in the soil. Will nitrate of soda serve? It is well known that it will draw moisture to itself from the surrounding soil. What little work has been done so far seems to prove that it at least will go far toward preventing the disease.

Many diseases get started in crops through too great changes in temperature. This cannot be controlled outside but under glass it is possible and here we find more diseases developing, especially in the early fall and late spring. The tendency for most of us is to try to save coal at these periods and many of our troubles are directly traceable to this. While it is well to be sparing of cost in production, we should never allow our crops to suffer. The steadier temperature at which plants can be grown means a greater return.

Many also in greenhouse work do not give sufficient air. Especially is this so among the newer growers. They seem afraid to give the plants all the fresh air



The Same Tree in Leaf the Following Summer.

possible and generally have to make two or three failures before they do so. I was asked the other day why the seedlings in a certain greenhouse died each year; the trouble was that the man did not ventilate and the plants burned. Fresh air will harm no plant as long as it does not strike directly on the plant.

Excess moisture in the greenhouse probably gives rise to more diseases than any other cause. Too many growers seem to think that the plant can stand any amount of moisture and then run the house at either a very high or very low temperature. Most of the mildew on lettuce and tomatoes is attributable to carelessness with either of these factors.

We are only started on this work, but so far, results indicate that a closer study must be made of each of these factors for each crop. While it is not so easy to handle this work outside, especially the temperature factor, still we have control of 2 out of 3 factors and nature will take care of the other much better herself than we could.

Vegetable Specialist,
Ont. Dept. of Agr., Toronto.

A. H. McLENNAN.

A Dangerous Fruit Pest New to Ontario.

EDITOR "THE FARMER'S ADVOCATE":

Last spring the pear thrips, a serious fruit pest new to Ontario, was discovered by the writer in small numbers in a pear orchard near Beamsville. This insect is very destructive to fruit trees in certain orchard sections of California, British Columbia, New York State and other places where it is established. For example, in California in the infested counties adjacent to San Francisco Bay, it is estimated to cause an annual loss of over \$10,000,000. On Vancouver Island the thrips, according to Messrs. Cameron & Treherne, of the Dominion Entomological Branch, has reduced the pear and prune crops in certain sections to negligible quantities. In view of all this it is important that Ontario fruit growers, especially those located in the Niagara District, should keep a careful watch for the appearance of this pest in their orchards so that, if necessary, immediate steps may be taken to check its activities should it become injurious.

Injury.—The pear thrips attacks all the common tree fruits—pears, apples, quinces, plums, prunes, apricots and peaches. In New York State, where conditions are comparable with ours, it is particularly destructive to pears.

The chief injury is caused by the thrips feeding on and, as a result, blasting the buds. The characteristic appearance of thrips-blighted pear blossom clusters is well shown in the accompanying illustration. On Vancouver Island, this blighting of the buds, prior to the discovery of the pear thrips, was attributed to spring frosts.

Life-History.—The adult thrips, minute, elongate, brownish insects with fringed wings which lie flat along the back, appear on the trees about the time the buds are opening. They enter the buds and feed on the tender tissues. Their eggs are inserted chiefly in the leaf and blossom stems. The small, active, whitish larvæ, which hatch from these eggs, after feeding for some three weeks on the blossoms, fruit and young leaves, attain their growth and then drop to the soil. There they form cells within which they remain until the following spring, at which time they emerge as adults.

Control.—As the pear thrips has not yet appeared in Ontario in destructive numbers (at least so far as we are aware) it is not necessary in this article to describe in detail the method of control. It is sufficient to say here that thorough applications of contact insecticides, e. g., miscible oils, whale-oil soap, nicotine sulphate, will control the insect. (The remedial measures which have proven satisfactory on Vancouver Island are described in detail by Dr. A. E. Cameron and Mr. R. C. Treherne in Bulletin No. 15, Entomological Branch, Dominion Department of Agriculture.)

The chief purpose of this article is to call the attention of orchardists to the occurrence of this serious pest in Ontario, and to invite those who suspect it to be present in their orchards to send specimens of injured buds to the Dominion Entomological Laboratory, Vineland Station, Ontario, for examination.

W. A. Ross.

Entomological Laboratory, Vineland Station.

Apple Exports From Nova Scotia.

A recent telegraphic fruit report from the office of the Fruit Commissioner at Ottawa contains a cable from Liverpool to the effect that 2,014 barrels of Nova Scotia apples, 2,156 barrels of Ontario apples, and 2,000 boxes of British Columbia apples, which had just arrived, all sold at maximum prices. These apples it is reported arrived in good condition with a fair percentage of slacks. It was also reported that 18,553 barrels of Nova Scotia apples arriving by another steamer were selling at maximum prices. The Fruit Commissioner adds the following with regard to the export of Canadian apples: "Since the lifting of the apple embargo, 34,740 barrels of Nova Scotia apples have been exported via St. John and 108,215 barrels via Halifax, up to January 16. Space has also been allotted for 62,500 barrels on steamers sailing from Halifax up to the end of January. In addition to these quantities exported, there have also been approximately 200,000 barrels of Nova Scotian apples marketed in Canada. After the end of January there will be only about 3,000 barrels of apples remaining in the Annapolis Valley."

Another note for the information of exporters reads as follows: "In order to meet objections resulting from the sale of apples at fixed weights per package, an amendment to the apple order comes into effect on Jan. 27. The amendment gives the importer the option to sell by actual net weight at six pence per pound or by package. Retail and package prices remain unchanged."

FARM BULLETIN.

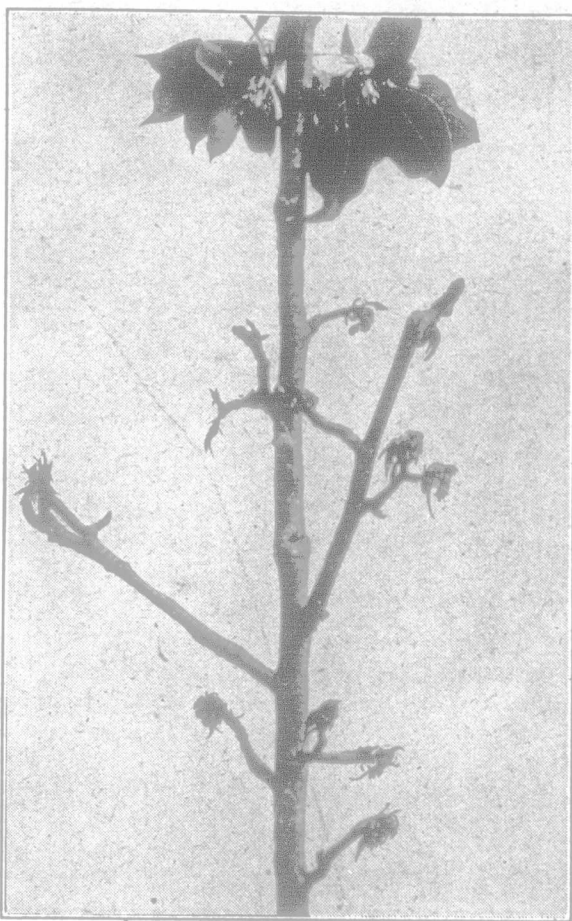
From the Farmers' Standpoint.

EDITOR "THE FARMER'S ADVOCATE":

Many of the people living in towns consider the price of farm products entirely too high, and some of the daily papers in echoing this idea have even gone so far as to call the farmers "profiteers."

Let us first consider some of the reasons for the present high prices (and we will admit that they are high compared with what they have been), and then we may consider whether the price of farm products is high compared with the price of some of the articles the farmer has to buy, and whether he is getting a fair return now for his labor.

If you will ask some of the city men who were brought up on farms, why they left the farm, you will get answers



Pear Thrips.

Pear branch showing "blighting" of blossom clusters due to thrips. —After Parrott.

somewhat like the following, which is what one of the Amherst merchants told me a short time ago. "When I was about sixteen years old I raised a great flock of ducks, I tended them well and faithfully all the summer and fall, and when I sold them they just brought me 35 cents a pair; I made up my mind there was no money in farming, and I went at something else."

There is the whole matter in a sentence; farm products got so cheap that the best boys would not stay on the farm and the farmer could not afford to pay good enough wages to keep men on the land, consequently less ducks and other farm products are raised, and the demand becomes greater than the supply and the price advances. And when the prices get high enough that as much money can be made on the farm as in town or the farmer can pay as high wages as the manufacturer, then men will stop drifting from the country to the town and the pendulum will swing the other way.

But are prices of farm products really high? Is butter at 50 cents a pound higher than the things that the farmer has to buy? Will it not keep any man busy more than ten hours a day the year around to keep ten cows? I mean to do everything about those ten cows, raise all the feed, repair all the fences, attend to the cows, make the butter and market it. In my opinion he will be a busy man from January to December. And what is the average return from ten cows? I understand that the average production of a Nova Scotia cow is less than 100 pounds of butter per cow; but suppose that he gets 150 pounds per cow, he has 1,500 pounds of butter for his year's work, which at 50 cents a pound is \$750. Out of this he must pay interest on his investment which cannot be less than \$2,000 and is likely to be more, and he will also be obliged to keep a team and a very considerable amount of farm machinery and equipment. Does he have reasonable wages left, and can he afford to pay his hired help \$2.00 a day and board? True, on a farm where there are ten cows there will be considerable other revenue beside the butter, but so there will be more than one man's work. Why should the farmer's wife make the butter and do the many other things about the dairy without her work being paid for?

We consider prices of poultry and eggs almost unreasonably high. However, take the case of two sisters brought up on a farm. One of them goes to town, works in an office, teaches school, or trains for a nurse. She lives in a home with hot and cold water and all modern improvements, dresses fairly fashionably, enjoys a good deal of entertainment, and receives anywhere from \$9 to \$18 a week. The other sister probably with as good a head and just as good a heart stays on the farm with her parents and attends to the poultry. Even at present high prices how much money does she see? Of course, she gets her board, that is, if she will rise at six a.m. and get breakfast for the rest of the family, and she has the great satisfaction of helping to make a home and of a duty well done, but in money she is not paid nearly as much as we pay even our teachers; and the daily papers seem to think that the teachers are very poorly paid.

Sometimes a farmer's son takes the car to the garage to have some repair work done. The foreman sends a boy to do the work who has been a schoolmate of the car's owner and his inferior both in the schoolroom and on the play ground, and when the bill is handed in he pays 70 cents an hour for the other boy's work. Is it any wonder if he asks himself how much he gets for his work on the farm?

Now I know there is another side to all this, and that if farmers could get as much for their work as the city man and interest on his investment he would soon be on "easy street," partly, perhaps, because his necessary and unnecessary expenses are not so great and partly because he works more than eight or ten hours a day, but these are some of the questions of life as they appear from the farmer's standpoint.

Cumberland Co., N. S.

C. H. BLACK.

United Farmers of Alberta Meet.

EDITOR "THE FARMER'S ADVOCATE":

The annual convention of the United Farmers of Alberta met in Edmonton on the week ending January 25, and the meeting marked another step in the progress of that organization. In spite of many obstacles the convention was fully as representative as ever. There were 715 accredited delegates present, representing a membership of over 17,000. Of course, the foremost figure was the President, H. W. Wood, who ranks high in the organized circles of agriculture and throughout the whole economic life of the Dominion.

The committee reporting on credit, advocated legislation that would develop a system of unit banks with capital of \$10,000 as a minimum, under provincial charter, regulation and control, and after a day's discussion the following resolution was brought in: "Be it resolved that the convention recommends, in the interest of agricultural development, that the present banking system be supplemented by a system of banks created by the Provincial Government, which Government shall provide plenary power to create, regulate and control, with requirements of \$10,000 paid up capital, and with power to take deposits."

The revised farmers' platform adopted by the Canadian Council of Agriculture was passed with few amendments. The main changes called for the abolition of the Senate and the Government operation of abattoirs.

The most important resolution to come before the convention was that dealing with political action. On this matter there was little discussion. Several amendments were offered, but as they dealt with political propaganda they were ruled out of order. President Wood, who introduced the resolution, said the aim was that political action should be entirely democratic. It must be started by the smallest unit and each district should have charge of its own affairs. While started by the U. F. A. locals it could include any other interests. The U. F. A. central will act only in an advisory capacity. The resolution read as follows:

"We urge the locals in the various federal districts to take immediate steps looking to the organization of district units for the purpose of holding at least one convention each year in each of such districts, such convention to continue one or more days as circumstances may require."

"The Central U. F. A. office shall, upon the request of ten per cent. of the locals in any district, render whatever assistance it can in calling and arranging for such convention."

"The primary purpose of such convention shall be to discuss ways and means of taking independent political action and selecting an independent candidate. The convention may, however, discuss and deal with any other district U. F. A. matters."

"Each convention shall be responsible for its actions in putting a candidate in the field, in financing and electing such candidates, but nothing in this resolution shall prevent any officer of the provincial organization giving what assistance he can when called upon."

"Men and women will both be eligible to participate in such convention with equal privileges to such extent as the law allows."

"The several district conventions may make arrangements through a joint committee or through the Central U. F. A. office for calling a provincial convention when and for whatsoever purpose they may deem it necessary."

The matter of grain prices for this year brought out a very interesting discussion. After full discussion it was decided to recommend an open market with the demand for elimination of speculation in the following resolution: "Be it resolved that we, the U. F. A. in convention assembled, demand that legislation be passed confining the dealing in all grains, whether on grain exchanges or elsewhere, to cash grain and sales for actual future delivery of grain and grain products, and that steps be taken to provide the necessary credit to finance all farmers who have grain for sale until such time as they desire to market the same."

J. W. Stark Dies at Brampton.

J. W. Stark, Agricultural Representative for Peel County, passed away at Brampton on February 2 after an illness lasting about one month. A severe attack of pneumonia following influenza was suffered for a couple of weeks, and this so aggravated the already weakened condition of one lung that tuberculosis finally caused death. John Stark was still in his twenties when the call came, and during his short term of service in behalf of agriculture he had become known for exceptional energy and a wealth of ideas.

Mr. Arkell Goes to England in Interest of Live Stock.

H. S. Arkell, Dominion Live Stock Commissioner, left last week for England where he will support the Government Trade Commission in London by supplying facts and details concerning the live stock situation in Canada. Mr. Arkell will devote his energies, it is announced, to the bringing about of the renewal of the export movement of bacon and other animal products from this country.

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending January 30

Receipts and Market Tops

Dominion Department of Agriculture Live Stock Branch, Markets Intelligence Division

	CATTLE						CALVES					
	Receipts			Top Price Good Steers (1,000-1,200)			Receipts			Top Price Good Calves		
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (Union Stock Yards)	Jan. 30	1918	Jan. 23	Jan. 30	1918	Jan. 23	Jan. 30	1918	Jan. 23	Jan. 30	1918	Jan. 23
Montreal (Pt. St. Charles)	4,684	3,450	8,560	\$14.50	\$12.25	\$14.25	503	349	650	\$16.75	\$17.50	\$18.00
Montreal (East End)	556	869	1,445		11.50	14.50	153	229	316	15.50	16.00	16.00
Winnipeg	864	983	1,573		11.50	14.50	195	210	146	15.50	16.00	16.00
Calgary	3,146	2,810	3,581	14.00	12.25	14.00	63	88	50	10.50	11.00	10.50
Edmonton	3,839	1,640	3,215	14.00	11.25	14.00						
	967	403	966	12.50	10.50	12.50	71	29	128	10.00		

	HOGS						SHEEP					
	Receipts			Top Price Selects			Receipts			Top Price Good Lambs		
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (Union Stock Yards)	Jan. 30	1918	Jan. 23	Jan. 30	1918	Jan. 23	Jan. 30	1918	Jan. 23	Jan. 30	1918	Jan. 23
Montreal (Pt. St. Charles)	6,232	6,174	7,729	\$17.00	\$19.00	\$17.00	728	445	3,033	\$15.00	\$18.75	\$15.00
Montreal (East End)	434	1,283	1,071	16.75	19.75	17.25	176	669	829	14.00	17.00	14.00
Winnipeg	409	759	824	16.75	19.75	17.25	491	512	1,340	14.00	17.00	14.00
Calgary	7,072	7,472	6,407	15.50	18.25	15.75	179	35	243	15.25	17.50	15.25
Edmonton	2,567	2,150	1,916	14.75	17.50	14.25	2,279	110	377	13.00		
	685	592	482	14.25	17.00	14.25	1,368	168	378	13.00		

Market Comments.

Toronto (Union Stock Yards).

Butcher cattle were in very slow demand and prices with the exception of those for choice heavy steers, ruled from 50 to 75 cents and, in some cases, \$1 per hundred lower compared with the prevailing prices of the previous week. The local consumption of meat has dropped off considerably of late while the overseas outlet has become temporarily restricted. The packers with their freezers full of meats, naturally wish to reduce their stocks and some of the largest abattoirs restricted their killings during the week to one-third the number handled weekly during the past few months. American abattoir buyers were operating on the market all week, and but for their presence trading would have been almost at a standstill. Approximately sixteen hundred cattle were shipped South during the week, but even with that clearance, twelve hundred head of the twenty-five hundred in the Yards on Monday, had to be carried over to the next market. Local abattoirs that frequently purchase eight to ten hundred head on the first market of the week, absorbed less than one hundred each, and, while trading was a trifle better on Tuesday, by Wednesday it was far from satisfactory to the drovers who had to accept heavy losses in many cases, in order to dispose of their holdings. Heavy steers were in good demand for the American trade, and prices of this grade could be classed as steady. One sale was made at \$16.25 per hundred, but this was exceptional and away above any other transaction. Good weighty steers of from twelve to twelve hundred and fifty pounds, sold from \$14.50 to \$15 per hundred, while those of lesser quality within those weights were weighed up from \$13.75 to \$14.50. For choice quality steers, weighing around eleven hundred pounds, good prices were paid in a number of cases a few head sold at \$14.50. One load of eleven hundred and fifty pounds was weighed up at \$14.25, a few sales were made at \$14, one load of eleven hundred pounds realized \$13.75, and numerous sales of animals of about equal weight were made from \$13.25 to \$13.75. Handy-weight steers and heifers were in slow demand, and heifers looked a good \$1 per hundred lower than during the previous week. A load of thick fat heifers went begging for a buyer and eventually shipped to the Buffalo market on speculation. The best sale of handy-weight stock was that of a load of nineteen steers averaging nine hundred and ninety pounds, which realized \$13 per hundred; choice quality steers in these weights sold mostly from \$11.75 to \$12.50, and those of good quality from \$11 to \$11.50. Heifers of equal weight and quality were quoted a good 50 cents per hundred below the prices for steers. Cows and bulls suffered in sympathy with other grades, although good heavy bulls held fairly steady on account of the demand from American buyers, and a few sales were made up to \$10.75 per hundred. Good bulls sold from \$9 to \$9.75, and those of medium grading from \$8 to \$9. Choice cows sold from \$9.50 to \$10.25, medium from \$7.75 to \$8.50, and common from \$6.50 to \$7.50. Cannery and cutters were weighed up from \$5.25 to

CLASSIFICATION	No.	TORONTO (Union Stock Yards)			MONTREAL (Pt. St. Charles)			
		Avg. Price	Price Range Bulk Sales	Top Price	No.	Avg. Price	Price Range Bulk Sales	Top Price
STEERS heavy finished	118	\$14.25	\$13.75-\$14.50	\$15.00				
STEERS good	236	12.91	12.25-13.75	14.50				
STEERS 1,000-1,200 common	17	11.20	10.00-12.00	12.50				
STEERS 700-1,000 good	1,033	11.92	11.25-12.50	13.00	61	\$10.00	\$ 9.50-\$12.00	\$12.00
STEERS 700-1,000 common	247	9.91	8.75-10.50	11.00	24	8.75	8.00-9.00	9.50
HEIFERS good	881	12.23	11.25-13.00	13.25	6	9.25	9.00-10.50	10.50
HEIFERS fair	111	10.04	9.00-10.50	10.50	14	8.25	8.00-8.50	9.00
HEIFERS common	30	8.46	7.50-9.00	9.25	34	6.50	6.00-7.50	8.00
COWS good	481	9.44	9.00-10.00	10.25	25	9.00	8.50-9.50	9.50
COWS common	564	7.25	6.75-7.75	8.00	111	7.00	6.50-8.00	8.00
BULLS good	71	9.50	9.00-10.00	10.50	6	8.50	8.00-9.00	9.00
BULLS common	61	7.60	7.00-8.50	9.00	90	6.50	6.00-7.50	8.00
CANNERS & CUTTERS	279	5.77	5.50-6.25	6.25	147	5.60	5.50-6.25	6.50
OXEN					11	8.50	8.00-9.00	9.00
CALVES veal	501	15.00	14.00-16.00	16.75	130	14.00	12.00-15.50	15.50
CALVES grass	2			8.00	23	6.00	6.00-	6.50
STOCKERS good	120	9.37	8.75-9.75	9.75				
STOCKERS fair	86	7.87	7.00-8.50	9.00				
FEEDERS good	290	11.25	10.75-11.50	11.75				
FEEDERS fair	57	10.50	10.00-10.75	10.75				
HOGS selects	5,880	16.45	16.00-17.00	17.00	365	16.65	16.75-	16.75
HOGS (fed and watered) heavies	65	15.54	15.00-16.00	16.00				
HOGS (fed and watered) lights	162	14.28	14.00-15.00	15.00	65	14.75	14.75-	14.75
HOGS (fed and watered) sows	122	13.37	13.00-14.00	14.00	4	13.75	13.75-	13.75
HOGS (fed and watered) stags	3	11.00		12.00				
LAMBS good	601	14.14	13.75-15.00	15.00	8	14.00	14.00-	14.00
LAMBS common	79	12.50	12.00-13.00	13.00	98	13.00	12.50-13.50	13.50
SHEEP heavy	8	8.50	8.00-9.00	9.00	25	10.00	10.00-	10.00
SHEEP light	22	9.25	9.00-9.50	9.50	45	8.75	8.50-9.00	9.00
SHEEP common	18	6.00	5.00-7.00	7.00				

\$6 per hundred. There was a light demand for stockers and feeders, and prices were unchanged. Calves were inclined to be easier with choice veal selling at \$16, and medium stock from \$13 to \$15.

Lamb receipts were very light and prices ruled higher. The bulk of the week's lambs sold from \$14 to \$14.75, with a few sales at the end of the week at \$15 and \$15.50 per hundred.

Hog prices were a trifle unsettled early in the week pending the decision of the American Congress as to the minimum hog prices for the coming month. When the January minimum of \$17.50 was set for February, prices here settled at a range of from \$16 to \$16.50, for fed and watered hogs. While prices will likely remain fairly steady around this level for the next few weeks it is scarcely expected that, following the drop in corn and oats, prices will strengthen any.

Of the disposition from the Yards for the week ending January 23, Canadian packing houses purchased 292 calves, 5,587 butcher cattle, 168 hogs and 1,573 lambs. Local butchers purchased 331 calves, 600 butcher cattle, 291 hogs, 798 sheep and lambs. Canadian shipments were made up of 47 calves, 231 stockers, 173 feeders, 13 hogs, 71 sheep and 87 lambs. Shipments to United

States points consisted of 1,064 butcher cattle, 168 feeders, 148 hogs and 344 lambs.

The total receipts from January 1 to January 23, inclusive, were: 22,264 cattle, 1,968 calves, 26,436 hogs and 14,149 sheep; compared with 16,705 cattle, 1,656 calves, 31,749 hogs and 5,441 sheep, received during the corresponding period of 1918.

Montreal.

Under light receipts and with considerable reductions in prices on the better grades of cattle, the markets were nearer to a clean-up than at any time during the last three weeks. Cannery sales in most cases at the previous week's price of \$5.50 per hundred and canner bulls from \$6 to \$6.50. Other grades of cattle were lower by 75c. to \$1.00 per hundred. One small lot of steers sold at \$12 but the majority of the steers were light and not fat and were weighed up around \$9 to \$9.50 per hundred. One load, composed of heifers and some very good young steers, averaging slightly under ten hundred pounds, sold at \$10.50, while some very common steers averaging seven hundred pounds sold at \$7. Good bulls, a number of which weighed around eighteen hundred were sold at \$9 and the best cows changed hands around \$9.50.

These prices were all considerably lower than had been expected by the drovers, and as the lower quotations added to the cost of carrying the cattle until they could be sold, some heavy losses were incurred. Calves, sheep and lambs remained steady.

Hogs were hard to sell at \$17, per hundred, off cars, despite the fact that there were very few offered.

Packers are as much as possible discouraging the shipments of live stock until some of the dressed meats already in store, has been moved.

PT. ST. CHARLES.—Of the disposition from the Yards for the week ending January 23, Canadian packing houses and local butchers purchased 316 calves, 427 cannery and cutters, 261 bulls, 736 butcher cattle, and 1,071 hogs. Canadian shipments were made up of 21 milk cows. Shipments to United States points consisted of 1,292 lambs.

The total receipts from January 1 to January 23, inclusive, were: 3,868 cattle, 753 calves, 4,433 hogs and 3,863 sheep, compared with 2,385 cattle, 631 calves, 4,607 hogs and 3,710 sheep, received during the corresponding period of 1918.

EAST END.—Of the disposition from the Yards for the week ending January

23, but but Ship siste lam T Janu catt shee calv recei of 19
Ca Show exhib succ impo num ber the h paid High was \$ while of ag load Angu which loads \$19.1 were of St Lucar other sold than for the 6,250 pared spond Ship prime \$15.50 to \$11 Ship heavy to \$14 comm But \$15.50 \$14.50 to go \$10 to \$15 to Cow \$11.50 \$11.50 \$9.50 very f heavy cows, \$7.50 ners, \$ Bull butche to \$8; Stoc \$10.50 best st \$8.25 Milk small to \$10 to \$85 \$50 to Hog hogs s \$17.90 a wide to \$16 Tuesa bulk s top w \$18; T

Markets

Agriculture Live Intelligence Division

Good Calves

Name	Week Ending	Price
18	Jan. 23	\$18.00
7.50		16.00
3.00		16.00
1.00		10.50

Good Lambs

Name	Week Ending	Price
18	Jan. 23	\$16.00
7.50		14.00
1.00		14.00
50		15.25

Top Price

00	\$12.00
00	9.50
50	10.50
50	9.00
50	8.00
50	9.50
00	8.00
00	9.00
50	8.00
25	6.50
00	9.00
00	15.50
50	6.50
00	16.75
00	14.75
00	13.75
00	14.00
00	13.50
00	10.00
00	9.00

considerably affected by the quotations of the cattle some heavy sheep and

at \$17, per fact that possible dis- live stock ats already

disposition week ending houses and 16 calves, bulls, 736 gs. Cana- up of 21 ited States

January 1 ere: 3,868 and 3,863 cattle, 631 10 sheep, ing period

tion from g January

Incorporated 1855

The Molsons Bank

invites farmers to discuss their financial requirement at any of their many branches.

If reasonable accommodation will enable them to increase production, they should apply to the local manager for it.

Saving Department at every Branch.

Interest at Highest Current Rate.

23, Canadian packing houses and local butchers purchased 146 calves, 1,157 butcher cattle, 824 hogs and 703 lambs. Shipments to United States' points consisted of 338 butcher cattle and 637 lambs.

The total receipts from January 1 to January 23, inclusive, were: 4,454 cattle, 501 calves, 2,959 hogs and 3,729 sheep, compared with 2,692 cattle, 578 calves, 2,947 hogs and 3,637 sheep, received during the corresponding period of 1918.

Buffalo.

Cattle.—Buffalo had its first Fat Stock Show last week, and both in number of exhibits and attendance, proved a most successful affair. Canadians took an important part in the show, making a number of entries and obtaining a number of prizes. Prices unequaled within the history of the trade in the East, were paid for all classes of stock exhibited. Highest price for an individual animal was \$53.50 for a white face yearling bull, while the best fat steer under two years of age sold at 42 cents a pound. Best load of cattle was a load of Aberdeen-Angus butchering heifers, out of Illinois, which sold at \$22.50 per hundred. Other loads (steers) ranged from \$18.75 to \$19.10. Among the Canadian exhibitors were A. White, of Guelph; J. D. Ferguson, of St. Thomas; W. W. Revington, of Lucan; A. MacLean, of Paisley, and others. On the regular market cattle sold generally from 25 to 50 cents lower than for the preceding week. Offerings for the week totaled 4,800 head, as against 6,250 for the previous week, and as compared with 5,950 head for the corresponding week a year ago. Quotations: Shipping Steers, Natives.—Choice to prime, \$16.75 to \$17.50; fair to good, \$15.50 to \$16; plain and medium, \$11.25 to \$12; coarse and common, \$10 to \$11. Shipping Steers, Canadians.—Best heavy, \$14.75 to \$15.25; fair to good, \$13 to \$14.50; medium weight, \$12 to \$12.75; common and plain, \$10.50 to \$10.75. Butchering Steers.—Choice heavy, \$15.50 to \$16; fair to good, \$13.75 to \$14.50; best handy, \$14.50 to \$15.25; fair to good, \$13 to \$14; light and common, \$10 to \$11.50; yearlings, choice to prime, \$15 to \$16; medium to good, \$13 to \$14.50. Cows and Heifers.—Best heavy heifers, \$11.50 to \$12.50; good butchering heifers, \$11.50 to \$12; fair butchering heifers, \$9.50 to \$10.50; light common, \$8 to \$9; very fancy fat cows, \$11 to \$11.50; best heavy fat cows, \$9 to \$10; good butchering cows, \$8.25 to \$8.50; medium to fair, \$7.50 to \$8; cutters, \$6.50 to \$6.75; canners, \$5.25 to \$5.75. Bulls.—Best heavy, \$10 to \$11; good butchering, \$10 to \$10.50; sausage, \$7.50 to \$8; light bulls, \$6.50 to \$7.50. Stockers and Feeders.—Best feeders, \$10.50 to \$11; common to fair, \$8 to \$9.50. Best stockers, \$8.75 to \$9.25; fair to good, \$8.25 to \$8.75; common, \$5 to \$7. Milchers and Springers.—Good to best, small lots, \$100 to \$135; in car loads, \$90 to \$100; medium to fair, small lots, \$80 to \$85; in car loads, \$70 to \$75; common, \$50 to \$55. Hogs.—The past week started with good hogs selling generally at \$17.80, few made \$17.90 and underweights, which showed a wide range, went anywhere from \$15 to \$16, according to weight and quality. Tuesday the market was little changed, bulk selling at \$17.80; Wednesday the top was \$18.05, with majority going at \$18; Thursday the bulk brought \$18.15,

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with a few up to \$18.25, and while Friday's top was \$18.25, most of the good hogs had to take \$18. Light hogs the latter part of the week sold up to \$16 and \$16.50, with some weighing between 140 and 150 pounds reaching as high as \$17.50. Monday Canadian hogs, of which there were twelve decks, sold largely at \$17.60, and Friday ten decks that came out of the Dominion moved at \$17.80, with one deck \$17.85. Throwout roughs reached up to \$15.50 and \$16, and stags ranged from \$13 down. The show hogs, which were sold Wednesday, brought somewhat higher prices, the first and second prize winners bringing from \$18.50 to \$18.75. Receipts the past week reached 24,200 head, as compared with 21,303 head for the week preceding, and 30,500 head for the same week a year ago

Toronto Produce.

Live stock receipts at the Union Stock Yards on Monday, February 3, consisted of 132 cars, 2,538 cattle 155 calves, 1,018 hogs, 265 sheep and lambs. Strong, active market. Cattle prices, 50 cents to \$1 higher; top for loads, \$16.50 per hundred for 12 steers average 1,250 pounds. Calves, \$1.00 higher. Sheep, steady; lambs 50 cents to \$1.00 higher; top, \$15.85 per hundred. Hogs, \$16.25 to \$16.50 fed and watered.

Breadstuffs.

What—Ontario (f.o.b. shipping points, according to freights)—No. 1 winter, per car lot, \$2.14 to \$2.22; No. 2, winter, per car lot, \$2.11 to \$2.19; No. 3 winter, per car lot, \$2.07 to \$2.15; No. 1 spring, per car lot, \$2.09 to \$2.17; No. 2 spring, per car lot, \$2.06 to \$2.14; No. 3 spring, per car lot, \$2.02 to \$2.10. Manitoba (in store, Fort William, not including tax)—No. 1 northern, \$2.24½; No. 2 northern, \$2.21½; No. 3 northern, \$2.17½; No. 4 wheat, \$2.11½. Oats—Ontario (according to freights outside)—No. 2 white, 59c. to 62c.; No. 3 white, 58c. to 61c. Manitoba (in store, Fort William)—No. 2 C. W., 63½c.; No. 3 C. W., 58½c.; extra No. 1 feed, 60½c.; No. 1 feed, 57c. Corn.—American, (track, Toronto, Jan. shipment), No. 3 yellow, \$1.45; No. 4 yellow, \$1.42. Peas (according to freights outside)—No. 2, \$2. Barley (according to freights, outside)—Malting, 73c. to 78c., nominal. Buckwheat (according to freights outside)—No. 2, \$1, nominal. Rye (according to freights outside)—No. 2, \$1.40, nominal. Flour.—Manitoba, (Toronto)—War quality, \$11.35. Ontario (prompt shipment)—War quality, \$10, in bags, Montreal and Toronto. Millfeed—(Car lots delivered, Montreal freights, bags included)—Bran, per ton, \$37.25; shorts, per ton, \$42.25. Hay.—(Track, Toronto)—No. 1, per ton, \$22 to \$23; mixed, per ton, \$20 to \$21. Straw.—(Track, Toronto)—Car lots, per ton, \$10 to \$11.

Hides and Wool.

Prices delivered in Toronto. City Hides.—City Butcher hides, green, flats, 18c.; calfskins, green, flats, 30c.; veal kip, 20c.; horsehides, city take-off \$6 to \$7; sheep, \$3 to \$4. Country Markets.—Beef hides, flat, cured, 18c. to 20c.; green, 16c. to 17c.; deacon and bob calf, \$2 to \$2.75; horsehides, country take-off, No. 1, \$6 to \$7;

No. 2, \$5 to \$6; No. 1 sheep skins, \$2.50 to \$4; horsehair, farmers' stock, \$28. Tallow.—City rendered, solids, in barrels, 14c. to 16c.; country solids, in barrels, No. 1, 14c. to 16c.; cakes, No. 1, 18c. to 19c. Wool.—Unwashed fleece wool as to quality, fine, 50c. to 55c. Washed wool, fine, 75c. to 80c.

Farm Produce.

Butter.—Prices again kept stationary on the wholesales during the past week, selling as follows: Creamery, fresh-made lb. squares, 56c. to 57c. per lb.; creamery, cut solids, 54c. to 55c. per lb.; dairy, 45c. to 52c. per lb. Oleomargarine.—32c. to 34c. per lb. Eggs.—Both cold storage and new-laid eggs declined on the wholesales during the past week selling as follows: Cold storage, 56c. to 57c. per lb.; new laid, 63c. per dozen. Cheese.—Cheese sold at unchanged prices, viz., new, 28c. to 29c. per lb.; new twins, 28½c. to 29½c. per lb. Honey.—Five, 10 and 60-lb. pails, per lb., 27c. to 28c. per lb.; sections, each, 30c. to 40c. Poultry.—Live weight prices being paid to producer: Chickens per lb., 22c. to 25c.; roosters, per lb., 20c.; fowl under 4 lbs., 20 per lb.; fowl, 4 lbs. and over, 24c. per lb.; fowl, 5 lbs. and over, 30c. per lb.; ducks, 32c. per lb.

Wholesale Fruits and Vegetables.

Apples continued to be quite active during the past week selling at \$3.50 to \$8 per bbl. and \$1.50 to \$3.75 per box for Ontario varieties. The western boxed selling at \$3.50 to \$4.25. Bananas firmed slightly as they arrived in much better condition, selling at 6½c. to 7c. per lb. Grapefruit kept stationary at \$5 to \$6 per case. Lemons declined selling at \$4 to \$5 per case. Oranges slumped and were a slow draggy sale at \$4 to \$6 per case. Rhubarb shipments were rather light the price remaining stationary at \$1.25 to \$1.50 per dozen bunches. Tomatoes were very scarce, No. 1's selling at 40c. to 45c. per lb.; low grade No. 2's going as low as 20c. per lb. Beans.—There were small quantities of white beans, shipped in, selling at \$4.50 to \$5 per bushel. Beets were a little easier at 90c. to \$1 per bag. Cabbage shipments were light and prices firm at \$1.50 to \$2 per bbl. Carrots kept stationary at 75c. to 85c. Cauliflower—California Cauliflower was fairly plentiful, selling at \$3.50 to \$4 per pony crate, and \$7 per large crate. Celery.—California celery arrived in large quantities and there was some very low grade choice quality bringing \$10 to \$13 per crate. Lettuce has been scarce and high priced, Florida head selling at \$7.50 per hamper; California Iceberg at \$7 to \$8 per case; home-grown leaf of very small size selling at 25c. to 30c. per dozen. Onions—Choice firm onions sold at \$2 per 100-lb. sack others ranging down to \$1.50 per 100 lbs. and \$1 to \$1.25 per 75 lbs. Potatoes were very weak at lower prices; Ontario, selling at \$1.15 to \$1.30 per bag, and New Brunswick Delawares at \$1.60 to \$1.85 per bag. Turnips kept stationary at 65c. to 75c. per bag.

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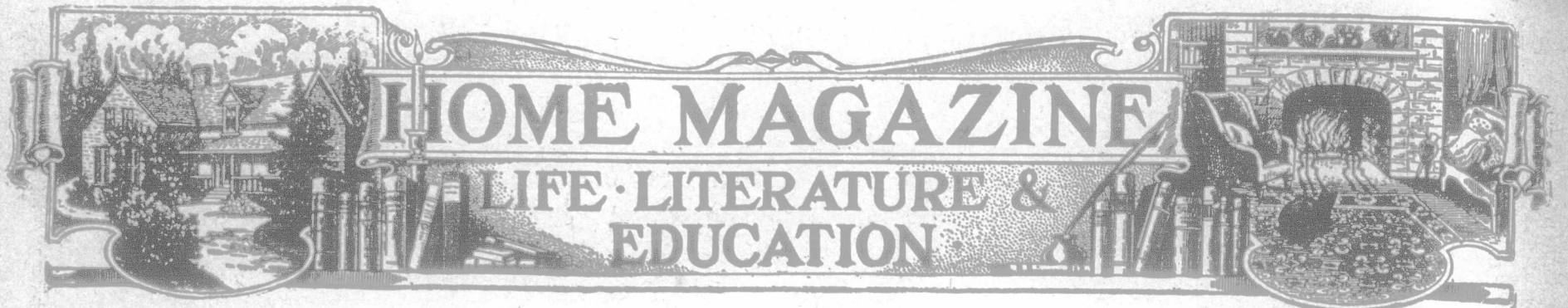
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Montreal.

Horses.—Quite a few good appearing horses are said to have been purchased during the past week at around previous prices. As a whole, however, trading was anything but active. Heavy draft horses, weighing 1,500 to 1,700 lbs., were quoted at \$250 to \$300 each; light draft, weighing 1,400 to 1,500 lbs., at \$200 to \$250 each; light horses, \$125 to \$175 each; culls, \$50 to \$75 each; fine saddle and carriage horses \$175 to \$250 each. Dressed Hogs.—Prices of dressed hogs showed small enough change last week. Demand was not specially active, and sales of country-dressed took place at 20c. to 22c. for light and medium weights, while heavy stock changed hands at 18c. Abattoir fresh-killed hogs brought 23c. Poultry.—Poultry is not affected by the general declining tendency in food products as yet, and prices of choice turkeys held firm at 42c. to 43c., though it is said that these figures are now hard to obtain. Lower grades were 37c. to 38c. Chickens were 31c. to 32c. for the milk-fed, and 24c. to 28c. for ordinary. Fowl were about the same price as ordinary chickens. Geese were quoted at 24c. to 25c. and ducks at 31c. to 33c. per lb. Potatoes.—No change of consequence has taken place in the price of potatoes as yet, but car lots of Quebec white stock were quoted at \$1.40 to \$1.45 per bag of 90 lbs., ex-track. Green Mountains were still quoted at around \$1.75 to \$1.80, with about 20c. added for smaller lots ex-store. Quebec turnips were quoted at \$1.25 per bag of 70 lbs. ex-store. Eggs.—Prices are undoubtedly declining. New-laid eggs were quoted at 65c. to 67c. per doz. Cold storage selects at 56 and cold storage No. 1 at 53 to 54c. The mild weather has had an effect upon production, both here and in the U. S., and cheaper eggs seem to be knocking at the door. It is said that purchases are being made in Ontario at 53 to 55c for straight gathered stock. Cheese.—Commission prices were as follows: 25c. for No. 1; 24½c. for No. 2 and 24c. for No. 3.



A Southern Lullaby.

BY VIRNA SHEARD.

[From Donald A. French's *Standard Canadian Reciter*. The lines in brackets are supposed to be sung or chanted.]

LITTLE honey baby, shet yo' eyes up tight—
(Shadow-man is comin' from de moon!)

You's as sweet as roses if dey is so pink an white;
(Shadow-man 'll get here mighty soon.)

Little honey baby, keep yo' footses still!—
(Rocky-bye, oh, rocky, rocky-bye)

Hush yo' now, an listen to dat lonesome whip-po-will;
Don't yo' fix yo' lip an start to cry.

Little honey baby, stop dat winkin' quick!
(Hear de hoot-owl in de cotton wood!)
Yes—I sees yo' eyes adoin' dat dare triflin' trick—
(He gets chillun if dey isn't good.)

Little honey baby, what yo' think yo' see?
(Sister keep on climin' to de sky—)
Dat's a June bug—it ain't got no stinger, lak a bee—
(Reach de glory city by an' by.)

Little honey baby, what yo' skeery at?
(Go down, Moses—down to Phar-e-oh,)
No—dat isn't nuffin' but a furry fly-round bat;
(Say, he'd betta let dose people go.)

Little honey baby, yo' is all ma own—
'Deed yo' is.—Yes,—dat's a fia-fly;—
If I didn't hab yo'—reckon I'd be all alone;
(Rocky-bye-oh, rocky, rocky-bye.)

Little honey baby, shet yo' eyes up tight;—
(Shadow man is comin' from de moon,)
You's as sweet as roses, if dey is so pink an white;
(Shadow-man 'll get here might soon.)

Among the Books.

The Story of the Grain Growers.

[*Deep Furrows*, by Hopkins Moorehouse. George J. McLeod, Ltd., Toronto, Publishers; Price \$1.50 net.]

IF a bigger book of the Canadian West has been written we have not yet come upon it.

Deep Furrows is a big book because it tells about big things in an adequate way.

It is not easy to write about business propositions and operations in such a manner that the story shall be interesting as a novel, and a good novel at that, yet this is precisely what Hopkins Moorehouse has done. He has taken the history of grain development on the great plains between Port Arthur and the mountains—a history of wheat, and dollars and cents—and so interwoven it with flashlights on the personality of men, searchlights on the machinations of big corporations, and bits of descriptive writing that sparkle like jewels on the page, that he has achieved not only a fascinating story but a work of literature.

Ideas plus that elusive and indescribable thing called individual "style" make Literature. Mr. Moorehouse's work is rich in both. And he knows his subject from A to Z. He has not written in haste. It is not hard to see that the subject grew in him. And when it had become almost full-grown then he became investigator, probing, sifting. Where praise has been due he has given it gladly but never fulsomely, where

blame, he has not feared to blame. The result is a book that bears the hall-mark of honesty of purpose and height of ideal on every page.

And it has been dedicated to the farmers, —very simply, "To the men and women of the soil."

That is significant.

Indeed we doubt if any farmer can read *Deep Furrows* without having his sense of dignity in his work strengthened, the realization that henceforth in the eyes of the world agriculture must more and more really take its place as "the basic industry," the one upon which every other industry in the long run must rest. Realizing this, very well then, may the farmer "stand upon his feet," with head erect and eyes fearlessly looking into the very face of the Universe, proud in service yet demanding his clear rights with dignity and confidence. Server yet no servant is he. Upholding the world, but by the strength of his hand, not upon bowed back. In short, if there is one farmer in Canada who has any doubts about his true status in the social and economic structure, and who is inclined to "look up to" the dapper, well-groomed chap selling "Gents' clothing," or whitewear, over a counter, he will do well to read *Deep Furrows*. If the last page does not leave him with at least the beginnings of a virile conception of, and new interest in, his own work, then he is hopeless.

FRANKLY the writer of this began the book with the inklings of a prejudice against the Western Grain Growers, as an Association, in his soul.—To him, Trusts, however honestly begun, were machines for the simplification and extension of business that usually degenerated into actual machines—cold and heartless as things of steel—cramps to put on the ultimate consumer, screwing closer and closer, wringing blood-money out, reducing its victims to a slavery from which there is little chance of escape. The Grain Growers, to his hazy consciousness of the matter, must become, in the end, only one other such Trust, perhaps worse than the rest because dealing with the very foodstuffs with which the victims must be fed. His conversion has already been intimated. It is not hard to tell the tone when metal rings true.

—This to make it clear that the writer of this is no mere partisan.

AND now to the book itself.

Deep Furrows is, to condense its idea into a nutshell, the record of a great co-operative movement. Co-operation it must be understood, may be removed, far as the Poles, from the thing known as "combine."

The story opens with a little homelike picture. A man who is named as W. R. Motherwell (afterwards Hon. W. R. Motherwell, Minister of Agriculture for Saskatchewan) is driving home from Indian Head, the sunlight flashing from the share of a new plough in the back of his wagon, and gleaming over the shorn wheat fields about "to the rimming skyline" of the Assiniboia plain.

The picture of Nature is fair, but there is the gloom of a November twilight on the man's face. The time is early October 1901, and he is reflecting upon the disadvantages under which the people in his big prairie country are laboring; especially the menace of a big wheat blockade which immediately threatens; the elevators and railways controlling the whole situation, the people obliged to take what is thrown them, as a dog takes a bone when it can get nothing else; —theirs only to toil and toil from dawn till dark, month in, month out, year in, year out, struggling for the bare necessities of life, while the man who handles the grain they grow builds palatial residences in Winnipeg and lives on the fat

of the land. The farmer, as a rule, doesn't want a palace; but he wants reasonable home comforts and an education and fair start in life for his children. All these could be secured if the wheat could be got out at a reasonable price and on time.

So thinking Motherwell drives along, "hunched in his seat, reins sagging."

—Comes riding along on a wiry broncho one Bob McNair, former corporal Royal Northwest Mounted Police. He, too, is scowling over the wheat blockade, and he talks about rifles and bloodshed to get "fair play."

But Motherwell will have none of that. His faith is pinned to constitutional reform; he believes that sufficient pressure will bring it, and so—

"Why can't we organize, too?" he asks in a flash of inspiration.

After that comes the long story: Of the private chat between Motherwell and Peter Dayman during which Motherwell reaches across the table for a pad of note paper and drafts a letter to the men of Wolsley, Sintaluta, Indian Head, Qu'Appelle and other places, asking them to meet for further discussion; of the meeting on the 18th Dec., 1901, in Indian Head, which proves to be the real nucleus of the whole movement; of the subsequent long and bitter fight with the railway and elevator companies, the banks, the Grain Exchange, even with internal discord—the most insidious and difficult enemy of all; and of the final victory with its bright outlook for the future. In the long uphill struggle there are tilts even with the Government, but upon the whole, after the unquenchable seriousness and persistence of the Grain Growers become sufficiently evident and the deadly tendency of the Powers at the Legislature to shelve things is jolted out of the way, the Government proves the friend rather than the enemy.

Motherwell was right; constitutional means have won out.

AT present in the West, although there may yet be storms to be encountered, for the straight farmer and rancher there is a clear light in the sky. Excessive dockage, short weights, depressed prices because of monopolistic manipulation are a nightmare of the past; so is the unjust car-distribution that for so long made the grower of grain feel, often, as though he were beating against a brass wall. To-day the Growers control one-third of the grain trade in the West and have become a political entity; they own their own system of elevators; they have acquired an extensive timber limit; their shipping needs are being met—for the most part they can send their grain overseas when and how they choose; they make known their needs and policy through a special journal, *The Grain Growers' Guide*; everywhere they are instituting co-operative purchasing of farm commodities. From Port Arthur to the Pacific the organizations stretch—the "United Farmers" of the various provinces, the "Farmers' Co-operative Elevator Companies," the "Grain Growers Grain Company"—separate for convenience, united when necessary, dovetailing for the meetings of the Canadian Council of Agriculture when any project needing the help of all has to be pushed through.

IS the Grain Growers' Association, then, a mere combine, a screw to force up the prices of grain even though doing so should run the risk of being at the expense of the pale faces and bloodless bodies of women and children who must have bread or die?

If such a suspicion lurks in your mind read pages 245 and on in *Deep Furrows*.—The men and women of the soil have rung true. They will have their rights, they will not be trampled upon and exploited further by those who exploited them for so long, but they are ready

to hand out the square deal.—To them co-operation does not mean "combine."

After reading *Deep Furrows* the conclusion is that everyone who believes in the least in co-operation as a means of securing public welfare should read this book. Perhaps, just here, it is not straining an opportunity to quote the reminder of its Editor-in-chief in London that *The Farmer's Advocate*, both East and West, has always stood for co-operation and that, had it not been for the work of the *Western Farmer's Advocate* and the *Nor' West Farmer*, the Grain Growers would have had a soil much less ready for their great work. Mr. Moorehouse does not mention this, but that is neither here nor there.

Deep Furrows, to conclude, reveals a hard way,—but every way that is worth while is hard. It shows that almost every man who shoulders a big movement forward is more or less martyred,—but no truly "big" man quails before martyrdom in a worthy cause. —It shows, too, the welcome fruits of success, and affords a glimpse of a long bright vista of better things to come.

To the "United Farmers of Ontario" organization, which is a logical extension of the "Grain Growers" of the West the book should be invaluable. It reveals pitfalls which may be avoided because of the clear light thrown upon them; it gives hope in the face of struggle; and, best of all, it points out, with no uncertain finger, the clear road of high ideals, which is the only one upon which any organization can long walk with safety or self respect.

SHOULD anyone be interested in this review enough to want to consider the platform of the Grain Growers' Association, he will find it given in full in the book, also, if he will take the trouble to refer to it, on page 2086 of the December 19th, (1918), issue of *The Farmer's Advocate and Home Magazine*, where it was published with an accompanying picture of the members of the Canadian Council of Agriculture at Winnipeg.

Of course it will be remembered that this program is being continually extended by resolutions brought up in the Provincial Associations, and which may ultimately be added to the larger program adopted by the Canadian Council of Agriculture. On Jan. 10th, for instance, the Manitoba Grain Growers, in session at Brandon, passed a resolution looking to closer union with labor unions and returned soldiers.

This, however, is an aside. To return, the writer of this will consider himself well rewarded if he has succeeded in placing a copy of Mr. Moorehouse's remarkable book on the shelves of the library of every thinking farmer in Canada.

Z. I. P.

An All-Canadian Reciter.

MR. Donald C. French, of Toronto, has recently compiled a book of recitations taken exclusively from the work of the best Canadian authors including John McCrae, Archibald Lampman, Bliss Carman, Albert Durrant Watson, Robert Service, W. H. Drummond, Bernard Trotter, James B. Dollard, Peter McArthur, Ralph Connor, Nellie McClung, and a score of others. The selections have been made from both prose and poetry, grave and gay, and are all gems of Literature; there is nothing common or trashy in the whole book. A section invaluable to amateur speakers and reciters is that devoted to the art of oratory and the oral interpretation of Literature. Indeed it is not straining a point to say that the book will be found a real boon to all who wish to give readings or recitations at entertainments during the winter. To secure it ask at your bookstore, or write to McClelland and Stewart, Publishers, Toronto.

Hope's Quiet Hour.

A Very Present Help.

God is our refuge and strength, a very present help in trouble.—Ps. 46 : 1.
The Lord stood by me, and gave me power.—2 Tim. 4 : 17, (R. V.)
Lord, what a change within us one short hour
Spent in Thy presence will prevail to make
What heavy burdens from our bosoms take;
What parched grounds refresh as with a shower!
We kneel, and all around us seems to lower;
We rise, and all—the distant and the near,
Stand forth, in sunny outline, brave and clear.
We kneel; how weak! We rise; how full of power!
Why therefore should we do ourselves this wrong,
Or others, that we are not always strong?
That we are ever overborne with care,
That we should ever weak or heartless be,
Anxious or troubled, when with us in prayer,
And joy, and strength, and courage are with Thee?

TRENCH.

I fancy I can hear some of you saying, as you glance carelessly through the lines given above.—“Why doesn't Hope give us something new? I have read that selection about a hundred times already.”

My object is not to tell you anything new, but rather to win entrance for old truths. We see words with our eyes, and hear words with our ears, which never reach the heart at all. Why have you read those words about prayer so often? It is because a great many people have felt their force and have passed them on.

Our first text to-day takes us back about 3,000 years. The Psalmist knows well what trouble is. He has seen the heathen raging in fury and the strong kingdoms shaken, yet he declares that he will not be afraid even though the mountains should be overwhelmed with the sea. Why? Because God is with him, his Refuge and Strength, a very present Help in trouble.

The next text was written about a thousand years later. Let us look at the writer.

Some years before—during his first imprisonment in Rome—he had described himself as “Paul the aged.” Then he was living in his own hired house though always chained to a soldier. Now he is again a prisoner. Perhaps he is confined in the dungeon which is still shown in Rome. One who had seen that dungeon described it to me. There are two cells, one above the other, and the lower one is entered only by a round hole in the floor of the upper one. How long St. Paul had been confined in that foul, close dungeon we do not know; but he felt sure the end of his earthly course was drawing near.

Writing to his dear adopted son, the young bishop of Ephesus, he describes the first day of his trial. Perhaps he had been accused of setting fire to Rome. The emperor Nero, who was suspected of starting the great fire himself, accused the Christians of the crime, and many of them were thrown to the lions or burned as torches to light the imperial gardens.

St. Paul had faced the crowds, gathered at his trial, with fearless calmness. He stood alone (apparently) with no advocate to plead for him. Even his friends had forsaken him in the hour of danger. But—like his Master—though apparently alone and defenceless in the hands of cruel foes, yet he was not alone. He wrote in the letter to Timothy: “But the Lord stood by me, and gave me power; that through me the message might be fully proclaimed, and that all the Gentiles might hear: and I was delivered out of the mouth of the lion. The Lord will deliver me from every evil work, and will save me unto His heavenly kingdom.”

He had been given a splendid opportunity to deliver his message to the Gentiles, and the Lord had stood by him and given him power. It was not personal safety he eagerly desired, but the chance to proclaim among the Gentiles the unsearchable riches of Christ. His message having been faithfully delivered he was ready for the next great adventure—that sharp stroke of the executioner which

Candy a Splendid Food

One of the most attractive forms in which food can be eaten—is candy.

Candy is composed principally of sugar, nuts, fruits, some fats such as butter, and chocolate.

All these ingredients are recognized by eminent medical authorities as food products, which the system craves and demands.

Let us examine their food values separately.

We all know that sugar is a body-building essential; about one-quarter pound of sugar being required by an adult every twenty-four hours.

Nuts and fruits yield a high percentage of nutritious materials.

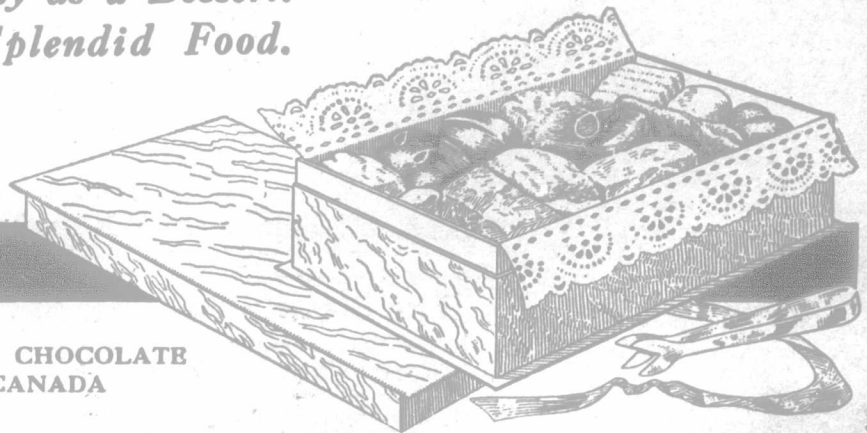
Fats supply the bodily fuel and should be used in every dietary.

Chocolate is a delightful stimulant, especially valuable in restoring energy.

Combine these ingredients and are they not still food?—satisfying, nutritious, essential and in a most delightful and properly balanced form.

Eat more candy. Candy is beneficial to all and harmful to none.

*Serve Candy as a Dessert.
It Is a Splendid Food.*



CONFECTIONERY AND CHOCOLATE INDUSTRIES OF CANADA

The Kitchener Factory where the Phonola motors, tone arms, etc., are made

The Homes of the

Phonola

REGISTERED

The demand for the "Phonola" has grown so large that two completely-equipped factories are now required.

In our Kitchener plant, skilled mechanics, who have specialized in phonograph work for many years, make the "Phonola" Sound Boxes, the Goose Neck Seamless Tone Arms, the quiet, smooth-running Motors, and other accessories.

In the Elmira plant experienced cabinet makers build the beautiful "Phonola" cabinets.

By making the "Phonolas" complete in our own factories in Canada we can guarantee the quality and workmanship and give exceptional values.

Cabinet Models from \$25.00 to \$310.00.
"Phonola" Double Disc Records—90c.

Call on our dealer's in your town, or write us.

Model Duke \$108

Model B \$55

The Elmira Plant where the beautiful Phonola cabinets are made

The Phonola Co. of Canada, Limited
Kitchener, Canada

should introduce him into the palace of his Lord. Only the first charge of his trial had been met, and he was well aware that his enemies had determined to remove him out of their way.

So he wrote calmly: "I am already being poured out as a drink-offering, and the time of my departure is come. I have fought the good fight, I have finished the course, I have kept the faith."

Now let us move forward into 1919 A.D., and listen to a woman who had been for a few days in a "flu ward" in the hospital. She said to me: "I felt like Daniel in the lions' den. But I was not afraid, for I knew that God was with me."

The human heart is much the same in all ages and in all countries. There is little help in saying—saying with the lips only—"I believe in God the Father Almighty;" but when we are sure, as St. Paul was sure, that the Lord is standing by us, then we have a very present help in trouble.

George Macdonald, in "A Reverie in Sickness" tries to picture to himself the entry into the New Jerusalem. He almost feels afraid as he thinks of the holy face of the Father, and says:

"Would He lay His hand on His forehead
On His hair as white as wool,
And shine one hour through His fingers,
Till the shadow had made me cool?"

And then he pushes away the fancy as foolish, knowing that if he could once behold that face everything else would be forgotten, and he would "fear only to lose one glimmer by one single sideway glance."

But that thought, also, he condemns as but a foolish fancy—the attempt to picture to ourselves the face "which is shining in all our spirits making them white as snow."

And so he exclaims:

Ontario Milk and Cream Producer's Association

ANNUAL MEETING

The Annual Meeting of the Ontario Milk and Cream Producer's Association will be held at the Carls-Rite Hotel, Toronto, on the afternoon of Tuesday, February 11th, at one o'clock. All Local Associations are invited to send delegates.

E. H. Stonehouse, President.

Manning W. Doherty, Secretary.

Follow the Crowd

It frequently pays to "follow the crowd." In arranging one's Life Insurance for instance.

There have been strong reasons influencing the numerous persons whose applications for protection have for ten successive years given The Great-West Life Assurance Company the largest Canadian business of all the Companies.

Low rates—high profits—liberal conditions—have been the reasons.
At any rate, investigate. Write, stating age, to

THE GREAT-WEST LIFE ASSURANCE COMPANY

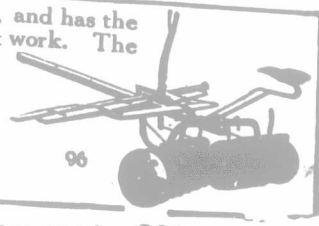
Dept. "J."

BUY WAR SAVINGS STAMPS Head Office: Winnipeg

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

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

See advertisement also on page 220



"Come to me, shine in me, Master,
And I care not for river or tree,
Care for no sorrow or crying
If only Thou shine in me.
I would lie on my bed for ages,
Looking out in the dusty street,
Where whisper, nor leaves, nor waters
Nor anything cool and sweet.
At my heart this ghastly fainting,
And this burning in my blood,
If only I knew Thou wast with me,
Wast with me and making me good."

Who is this Who can capture the hearts of strong men in this fashion? The world has not grown away from Him. Men—as well as women and children—reach out hungrily for the only Friend Who understands them perfectly and Whose love cannot be chilled even by their indifference. We all want a friend who will stand by us when others forsake or disappoint us. We want a Friend Who is not only always at hand and willing to help but Who is able to strengthen us with power.

The war may be over—or the world trouble may break out again—but it is very certain that private troubles will make themselves felt in our hearts and in our homes. Let us never "do ourselves this wrong, or others, that we are not always strong." We can't afford to turn away heedlessly from Him Who still stands invisibly in our midst and offers the power and heartening fellowship we need. I have had many letters from readers of the Quiet Hour, letters which reveal a wistful desire to find the Desire of all nations, or letters which express exultantly the joy of having found Him. Multitudes who have endured trouble, hardship or anxiety during the Great War have turned for strength to Him Who is a very present help in trouble. They have placed their cause in the hands of their Mighty Advocate, knowing that He is able to keep that which is committed to Him.

And now will you read again the familiar lines given above, and carry them into practice? It is your duty to the world, as well as to yourself, to gain strength for service—and joy and strength and courage are in God's hand, for you. They are for you, if you want them with all your heart and mind and will—a half-hearted Christian can't reach them.

DORA FARNCOMB.

For the Needy.

Mrs. J., Perth, Ont., sent five dollars for the "Quiet Hour Purse." Two dollars went out the same day in the shape of milk tickets for a sickly baby (the child is six months old and only weighs 9 pounds.) The other three dollars will be spent on a family where there are 5 children and the father has had a "stroke".

Several readers sent parcels of S. S. papers for the "shut-in". These will be appreciated by some of my friends in the hospital.

DORA FARNCOMB
6 West Ave., Toronto.

After Sunset.

I have an understanding with the hills
At evening, when the slanted radiance fills
Their hollows, and the great winds let
them be,

And they are quiet and look down at me.
Oh, then I see the patience in their eyes
Out of the centuries that made them wise.
They lend me hoarded memory, and I
learn

Their thoughts of granite and their whims
of fern,

And why a dream of forests must endure
Though every tree be slain; and how the
pure,

Invisible beauty has a word so brief,
A flower can say it, or a shaken leaf,
But few may ever snare it in a song,
Though for the quest—a life is not too long.
When the blue hills grow tender, when
they pull

The twilight close with gesture beautiful,
And shadows are their garments, and the
air

Deepens, and the wild veery is at prayer,
Their arms are strong around me; and I
know

That somehow I shall follow when you go
To the still land beyond the evening star,
Where everlasting hills and valleys are,
And silence may not hurt us any more,
And terror shall be past, and grief and war.
—Grace Hazard Conkling, in Century.

Every page of this Book will interest you

"What the Farmer can do with Concrete" is not a book to while away an idle hour. It's a book not so much for reading as for gaining useful knowledge—

Knowledge that you can turn to profitable use in the building of such Concrete improvements as your farm must eventually have.

Concrete—the material that has *everything* to recommend it for farm buildings—is fortunately a material that lends itself to successful construction without the need of skilled labor. This book of ours explains how, with your own two hands, you can build most of the things of concrete which your farm needs.

Whether your problem involves a barn or a house, a silo, or a feeding floor, a root cellar or a water trough—any structure you can think of—concrete represents greatest ultimate economy.

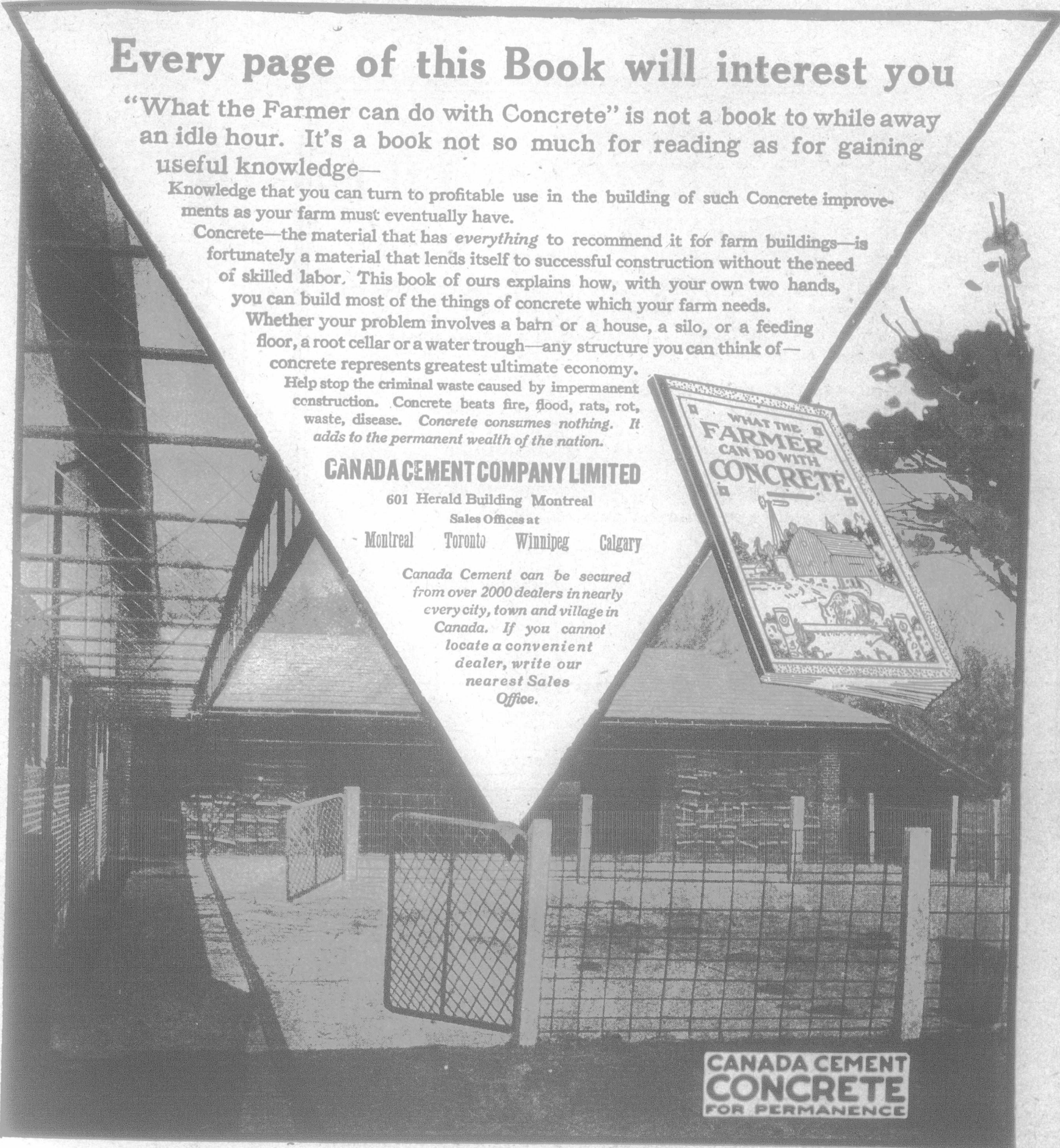
Help stop the criminal waste caused by impermanent construction. Concrete beats fire, flood, rats, rot, waste, disease. *Concrete consumes nothing. It adds to the permanent wealth of the nation.*

CANADA CEMENT COMPANY LIMITED

601 Herald Building Montreal

Sales Offices at
- Montreal Toronto Winnipeg Calgary

Canada Cement can be secured from over 2000 dealers in nearly every city, town and village in Canada. If you cannot locate a convenient dealer, write our nearest Sales Office.



CANADA CEMENT CONCRETE FOR PERMANENCE

Our Serial Story

The Forging of the Pikes. A Romance Based on the Rebellion of 1837.

Serial rights secured by The Farmer's Advocate and Home Magazine.

CHAPTER XI. To a Far Country.

August 6th, 1837.

ON Thursday morning our neighborhood was startled by the news that Mrs. Deveril had died suddenly. Big Bill, who was going up to the Village in his wagon, carried the news telling anyone he met on the road and shouting it to the men in the fields and the women in the yards as he passed.

At our place he called it over the fence to me, and I went in to tell my mother.

She was plaiting hats for us, of the tough new straw, the long coils of the braid lying about her feet, but she arose immediately and began to roll it up.

"I must go to Barry at once," she said. "Perhaps I can do something."

We are not prodigal with caresses in

our house—the understanding and affection among us is too deep to require much demonstration,—but at that moment I drew my mother into my arms and kissed her. I think she feels, as I do, that such occasional outburst means more than continual expressions that come to mean comparatively little, were it only for frequency, and usually when I show my feeling to her thus, she looks up at me with all the motherlove in her gray eyes and makes believe to scold me for my boyishness; but this time she neither looked nor smiled, for which I loved her, for I knew that her thought was all of Barry.

My father drove her over in the wagon, and at nightfall she returned, finding me already washed and dressed to go to my girl.

"Yes," she said, "I think Barry may be glad to have you. I came away because the house was filling. I suppose there'll be a wake."

At which the heart of me turned resentful.

"I hate wakes," I said.

"So do I," returned my mother, "but it is the custom."

"And I suppose there'll be pipes—and drinking," I said, bitterly enough.

"Mother, will Barry have to face that rabble?"

"I don't think so," she replied, "Mistress Jones has taken charge—"

"Of course," I interrupted, for this news pleased me none too well.

"She's very capable," said my mother.

"Well, for one thing Barry may be thankful—she'll entertain the crowd."

But at that my mother raised a checking finger to me.

"Come, come," she said, "you are over hard on Mistress Jones.—Here, let me brush you."—And with that she made much ado to broom off a coat from which I had already knocked every mote of dust. Often she does that, but I permit her, out of lovingness to her lovingness.

The evening was very still. As I walked along the bush path, through the Golden-Winged Woods, it seemed to me that all the air held an unusual silence. And then I realized that it was the brooding of Death that had settled upon me and thrown its quiet mantle over the trees; for there had been other times, when, going through to meet Barry, the whole of the dim shades had seemed to be full of light and song, and when

I had returned to earth suddenly to find that all the light and all the song were in my own soul.

That night, however, I walked along, half awed and thinking about Death, which is not common enough yet, in this new country, to be easily dismissed.

What is It? What does It mean? Why are we placed here for so short time when we must needs spend so much of life in the struggle to be fed and clothed? Why cannot life last for one thousand years so that people might go on to really great accomplishment before being snuffed out like so many candles?—Of all this did I ponder as I walked along, more slowly than usual, in the growing darkness, winding in and out among the great boles of the trees.

.....

And then I remembered a sermon that the minister had preached about heaven, a city as broad as long, and as high as broad, with streets of gold, and walls of precious stones, and gates of pearl, and the spirits of the dead walking about in white robes, playing on harps forever and ever.

On the way home The Schoolmaster and Hank and I had walked together.—



NORTH AMERICAN LIFE ASSURANCE CO.

HEAD OFFICE TORONTO, CANADA

THE business for 1918 was the largest in the Company's history. To-day the financial position of the Company is stronger than ever.

EVIDENCE of this is found in the following outstanding figures which are substantially in excess of those for any previous year.

Policies Issued and Revived	\$13,552,161.00
Total Assurance in Force	70,950,316.00
Cash Income	3,467,440.76
Assets	18,185,610.75
Net Surplus	2,751,990.60
Profits Paid Policyholders	285,339.48
Total Payments to Policyholders	1,780,385.04

THE amount of death losses incurred was over \$300,000 in excess of the previous year, due to the influenza epidemic and war claims.

THE sum of \$2,043,035.26 has been paid to Policyholders as dividends or surplus during the past ten years.

Ask for a copy of the Annual Report

W. KERR GEORGE,
D. McCRAE, Lt.-Col.,
Vice-Presidents.

"Solid as the Continent"

L. GOLDMAN,
President.

"Well, what did you think of that?" asked Hank, in his direct way.

"Bosh! All bosh!" exclaimed The Schoolmaster. "A sort of celestial Bastille by George! A holy cubical just big enough for the elect—with need of a hades big enough to catch all the left-overs, including all the radical and unorthodox.—Bosh! All bosh!"

At that we laughed, and I was glad that my dear mother was not by, for she always feels that one should be very solemn and filled with awe when sacred subjects are mentioned, and might not have understood that we laughed only at The Schoolmaster's interpretation of the minister's sermon, and a little at the sermon itself, but not in the least at anything truly sacred or holy.

After that we asked The Schoolmaster what he really thought about heaven.

"Now, you know," he said, "I've only my own idea about it. But it is that things 'll not be different enough to be strange and unhomelike. We're Persons, boys. Each one of us a Person. What would be the sense of making us one sort of personality, with one set of likings and aspirations and desires, and then changing us in the wink of an eye, when Death comes to something altogether different?—Phut! The economy of the Universe wouldn't stand for such a waste of energy.—Put Red Jock there at twanging a harp and walking about in long white skirts forever and ever!—Phut! Bosh and nonsense!"

At that Hank and I shouted with laughter, as we looked at Red Jock, striding ahead of us, gnarly and rugged, with hairy arms of brawn and big hands knuckly from use of the blacksmith's hammer.

"I'll bet he'd prefer a forge in the Other Place," ventured Hank, still laughing. "Let's see what he thinks about it. —Hallo, Jock! Hallo!"

Red Jock turned about and waited for us.

"Well, Jock, and what did you think of the sermon?" asked The Schoolmaster. Jock took off his big straw hat and scratched his head.

"Weel," he said, "Ah've juist been thinkin' about it an' tryin' tae reckon it oot, but the 'rithmetic o't's got me

The Great Annual Breeders Combination Auction Sale of CLYDESDALE and PERCHERON STALLIONS, MARES, COLTS AND FILLIES

will be held Mon. & Tues. Mar. 3rd & 4th AT UNION STOCK YARDS, TORONTO

Entries should be made at once to appear in the splendid catalogue, which will be published on the 10th of this month.

UNION STOCK YARDS OF TORONTO, Ltd.

Horse Department - Walter Harland Smith, Manager

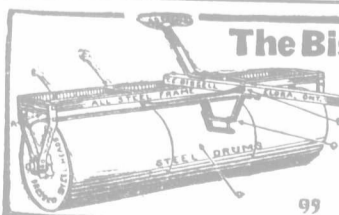
FIELD TILE

If considering draining your farm or orchard, we can supply all sizes, best quality Hard Burned Clay Tile, and will guarantee prompt shipment. Write for prices.

NATCO IMPERISHABLE SILO

Don't consider purchasing a Silo until you let us tell you about the Silo which lasts for generations.

NATIONAL FIRE PROOFING COMPANY OF CANADA, LIMITED
Agricultural Dept., Dominion Bank Bldg. TORONTO



The Bissell Steel Roller has a rigid steel frame

—no wood whatever. Large roller bearings and strong 2" axles insure durability and great strength. The Bissell is a 3-drum Roller of good weight, built to stand hard usage and give great service. Write Dept. W for free catalogue.

T. E. BISSELL CO., LTD., Elora, Ont.

See advertisement also on page 218

beat. . . Noo, Dominie, hoo far, d'ye tell me, is a furlong?"

"By our measure an eighth of a mile," said The Schoolmaster.

"An' the City wis twal thousan' furlongs ilka way. That wad be?"

"About fifteen hundred miles," replied The Schoolmaster.

Jock pondered for a minute. "It's a braw big place," he said. "A lot o' fowk cud be packed in't, specially them spirit-buddies that, Ah doot, cud squeeze up fine gin the croodin' wis over-muckle. —But the height o't 's the same as the length an' the breadth o't?"

"So it is said," replied The Schoolmaster.

"That wud be sort o' square ilka way, like the bit boxies the tea comes in."

The Schoolmaster nodded, his lips twitching in endeavor to keep a straight face.

This gave Jock long pause, as he strode along beside us. Then he turned to us, with a twinkle in his eye.

"Ah'm dootin'," he said, "at the pair buddies maun be unco' keen tae get oot whan sic a wa' had tae be constructed tae haud them in."

When The Schoolmaster could get in a word again for our laughing. "But the wall was only one hundred and forty and four cubits," he said.

"Aye.—An' hoo lang d'ye say is a cubit?"

"My dictionary says as long as from a man's elbow to the end of his middle finger," replied The Schoolmaster.

—Whereupon Jock extended his great arm in its homespun sleeve, and calculated, brows down.

"Juist a hummer an' forty-fower o' them!" he exclaimed, presently, "Hoots mon! the buddies 'ud be ower that an' awa' afore ye cud say Jock Robinson!"

Even yet I can see the Master standing still in the middle of the road and bending double with his laughter over this sally, while Hank and I were good seconds to him, and Red Jock looked on with a grim smile.

"Of course, you know, Jock," remarked The Schoolmaster, when he could get his breath again, "I'm not an authority on ancient measurements. . . Then he became very serious.

"I've an idea," he went on, "that all that talk about the City is figurative. It's very beautiful, too. Don't you think its being as broad as long and as high also, might mean, Jock, that it's a sort of four-square place—all-round fair and square, with a square deal for everybody?"

Jock looked at The Schoolmaster quickly, staring for a moment, his bushy brows raised. Then the light of understanding came into his blue eyes.

"Noo ye're sayin' it!" he exclaimed.

"And I've an idea," went on The Schoolmaster, "that things 'll seem natural enough, and that the people who've left us and gone over there come back to see the folk at home when they wish. Where heaven is, I don't know, nor what spirit-bodies are like, but I believe they'll have powers far beyond what these possess. Sometimes I look up at the stars and wonder if, some day, we shall not pass from one to another with less trouble than it now takes to go up to the Village. There must be great things ahead of us, my lads, and I guess doing the best we can here will give us a good push ahead over there."

Red Jock had hung on every word, as, indeed, had Hank and I also.

"Then ye'll no be thinkin'," he queried, "at we'll hae tae be tinglin' on wee harpies a' the time."

This, following on the heels of our previous remarks, gave the Master a sore time again to keep from smiling, but, seeing that Jock was quite serious, he quickly gained control of himself.

"I'm thinking," he said, "that there'll be plenty of useful work for everyone—everyone to his interest, you know."

"An' there'll no be trampin' about on hard gowd walks 'at 's like tae mak' corns on yer taes?" pursued Jock.

The Master's face twitched, while Hank an I, out of descretion, dropped a pace or two behind.

"It's my belief," replied he, "that there'll be trees, and grass, and flowers, as well as friends,—and sunrises and sunsets, too."

"An' maybe a wee burnie wimplin' among the rashes?"

"Why not?"

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"An, sweeps o' heather ower the braes?"
 "Why not?"
 Red Jock turned to The Schoolmaster
 right about. "Noo, ye'll no be thinkin'
 there might be a bit smiddie at the edge
 o' the bush, gin ye wanted it?" he asked.
 The Schoolmaster nodded, smiling.
 "An bit nags tae come trottin' in,
 whinnerin' at ane anither, wi' their
 feet tae be 'tended till?"
 "If the smithy was there there'd need
 to be the horses, Jock. I've never just
 seen why animals that people have loved
 should not persist, too. My little dog
 Blazer could give lessons in honor and
 fidelity to a good many people."

Jock strode on again, looking straight
 ahead, thinking.
 Then presently he brought his big
 hand down with a thud on the side of his
 breeches.
 "It's a braw conception o't," he said.
 "Accordin' tae that I'd think na mair
 o' deein' than o' gaein' across tae Tam
 Tamson's slashin' bee!"
 "No," returned The Schoolmaster.
 "Death must be a natural thing, after all,
 Jock."
 "An' no a curse at a' as we've been
 telled."
 "Perhaps an open door, rather. The
 good God is a God of Love, so it is said,
 in plain words. There can be nothing
 figurative about that."

Again Red Jock strode on, leading
 us, and presently, to keep him thinking,
 the Master asked.
 "What do you think about hell, Jock?"
 Jock rubbed his chin. Then he parried
 the question adroitly.
 "Ye'll be dootin'," he queried, glancing
 sidewise at The Master, "at hell 's
 maybe no sae het as they mak' oot?"
 The Schoolmaster laughed.
 "I'm afraid the thought of hell isn't
 bothering me as much as some think
 it should," he said. "I'm too busy trying
 to walk straight, as I see it, to have much
 time left to think of the punishment if I
 don't."

"But the—the hell-fire an' brimstone
 business," persisted Jock, "it'll be what
 ye dub figgerative talk too?"
 "As I see it, just that," said The
 Schoolmaster.
 Jock nodded with decision.
 "Ah've mony a time thoct o't when
 Ah've been blawin' at the forge," he
 went on, "an' Ah've figgered oot 'at
 the fire maun be cooler than the meenisters
 say, or else 'at the puir spirit-buddies
 maun be no sae sensitive. . . Noo, ye'll
 be meanin', Ah doot, 'at thae rampin' an'
 roarin' fires is juist fires o' tribulation."

The Schoolmaster glanced at him, a
 bit surprised, I thought.
 "Aye, Jock.—And of purification, above
 all things."
 "Noo, ye've said it," exclaimed Jock.
 "Why cudna Ah hae worrit that oot fer
 masel?—Why, Ah've cast a bit airm
 intil the fire covered wi' mud an' grime,
 an' it's cam oot clean as a whistle. . .
 Ye'll be sayin' it's that way wi' oorsels,
 ony the fires 'll be in oor ain herts juist,
 an' no burnin' aff oor bit fingers an' tae,
 an' scorchin' aff the hairs o' oor scalpies."
 —Whereupon The Schoolmaster gave
 him a great approving slap on the back.
 "You've strayed 'far frae the auld kirk,
 Ah doot," Jock," he laughed.

But at that Jock bristled. "No sae far as
 some o' them thoct," he said. "For Ah
 doot we're a' strivin' tae gang the ane
 road, an' it 's ony oor bit nags 'at 's
 different."

Every word of this conversation came
 back to me now (although I fear I have
 made poor hand at writing down the brogue
 of Red Jock) as I walked towards the very
 presence of Death,—and especially did
 The Schoolmaster's little sermon come
 to me, I wondering much about Mrs.
 Deveril, and looking up to the few stars
 twinkling above the tree-tops.
 Something, also, did I wonder about
 the history of the woman, of which never
 a word had been spoken to anyone in the
 Settlement, to my knowledge. Reticent
 and cynical, she had gone her own way,
 and now she had slipped off into the
 Unknown, with sealed lips.
 In the little that I myself had seen
 of her, she had appeared a woman of
 some education, who had bequeathed
 to Barry the tongue which she spoke,
 and yet I had tried to close my eyes to
 some little commonnesses in her that
 put her out of the same standing as
 my mother. To my Journal I may
 confess that I had never liked Mrs.
 Deveril, nor quite forgiven her for marry-

ing old Nick. . . And yet Barry had
 been the outcome of that union.

Coming out from the wood I could
 see lanterns twinkling about the tavern
 yard, and when I reached the door saw
 the place filled with people. But my
 heart was softer now, and I knew that
 the most of them had come in kindness of
 heart. For in this bush country, after
 all, we stand shoulder to shoulder.

There was quiet talking, but no rough-
 ness anywhere, although there were
 men on the benches outside and in groups
 about the yard. Looking among the
 women in the house I could not discover
 Barry, but Mistress Jones came to me.

"Would ye like to see the corp?" she
 asked, but I shook my head and asked
 for Barry.

"She's disappeared," she whispered,
 "clean an' clever,—never a sight of
 her since six o'clock.—An' everybody
 askin' how she's takin' it, too! But
 Nick's in there with Big Bill an' some of
 'em. He thought mebbe the bar ought
 to be open, free-handed like, but I put
 my foot on that. 'Never a drop,' said
 I, 'but mebbe a wee jug onst an hour or
 so. Throw that bar open, Nick Deveril,'
 sez I, 'an' you know what 'll happen.
 It 'ud be a disgrace,' sez I, 'An' no
 meanness in you not to let it, either.
 This isn't no loggin', this isn't.'"

With that I saw someone beckoning
 to me from the back door, and when
 I reached her was surprised to find
 Old Meg, whom I did not know for
 the reason that her head was uncovered,
 and her shawl and stick lacking. Not
 so old did she look at all, for her hair
 is quite black and wavy, when one can
 see it, and her eyes good enough, keen
 and dark and maybe a bit solemn.

When she spoke, too, there was a
 different quality in her tone that made
 me look sharply; yes, truly enough it
 was Old Meg, with the brown skin and
 sharp features, who weaves homespun for
 her neighbors but has little else to do
 with them, and goes hobbling about our
 roads with her stick.

For a moment the impression came to
 me that the stick and the big bonnet
 and shawl must be some sort of disguise,
 then I remembered that all our elderly
 women wear the bonnet and shawl, and I
 noticed that she really limped a little as
 she walked.

"Come out," she whispered, "I'll
 take you to Barry. You don't want
 to see the 'corp', as Sally Jones calls
 it."

There was something in the flippancy
 with which she spoke that made me
 shudder, and yet I perceived that what
 levity there was was directed only against
 Mistress Jones.

I followed her out across the back-
 yard and down a little path that led to
 the beginning of the trees, she keeping
 ahead of me, like something of thicker
 darkness than the night and saying
 never a word at all.

Where the trees began again, she
 stopped and called gently.

"Barry! Bar-ry!"

There was a rustling among the grass
 quite near us, and Barry stood up.

"What is it, Meg?" she asked. "Do—
 do they want me?"

"Never a want, my dear," said Meg,
 "and if they did I'm the last one to tell
 them where to find you.—It's just a young
 gentleman here, that you'll maybe like
 to see."

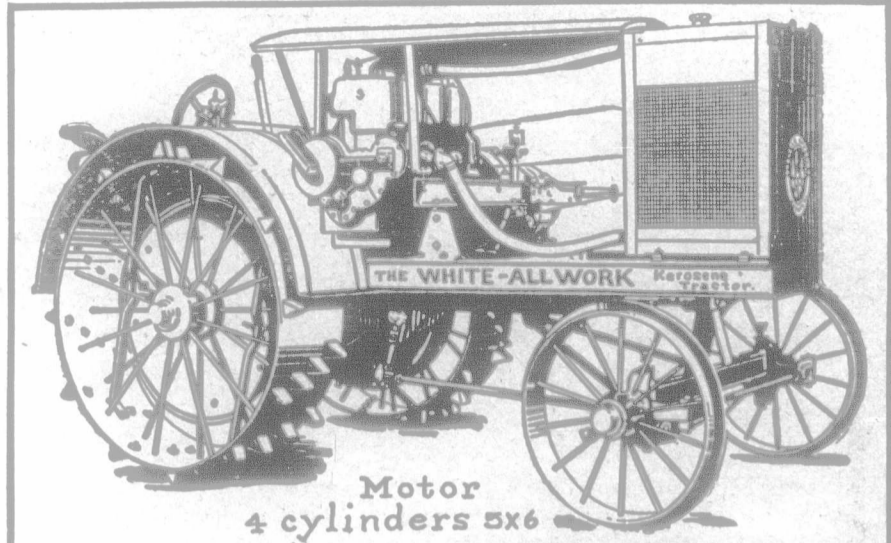
Then I spoke to my girl, and she came
 to me very quickly and put her two hands
 in mine. So we stood, and when we
 turned about again Meg was nowhere to
 be seen.

"It was good of you to come, Alan,"
 said Barry. "Sit down here. I—I don't
 want to go where there are—people."

We sat down on the dry brown grass,
 and I did not know what to say at all.
 In the interval a cricket chirped and
 chirped, and a wagon rattled down the
 road; then Barry broke the long tension.
 "It was good of you to come, Alan,"
 she repeated, speaking in a low, hurried
 voice. "I needed someone, but not those
 people in there. They're kind, everyone
 —but—Alan, I think I know now why
 a wild animal goes off by itself when
 it's wounded."

"You've been wounded," I said, closing
 my hand over hers, and she let it remain
 so.

"Over something more than just
 —mother," she said. "I—Alan I've
 been wondering, and wondering if I have



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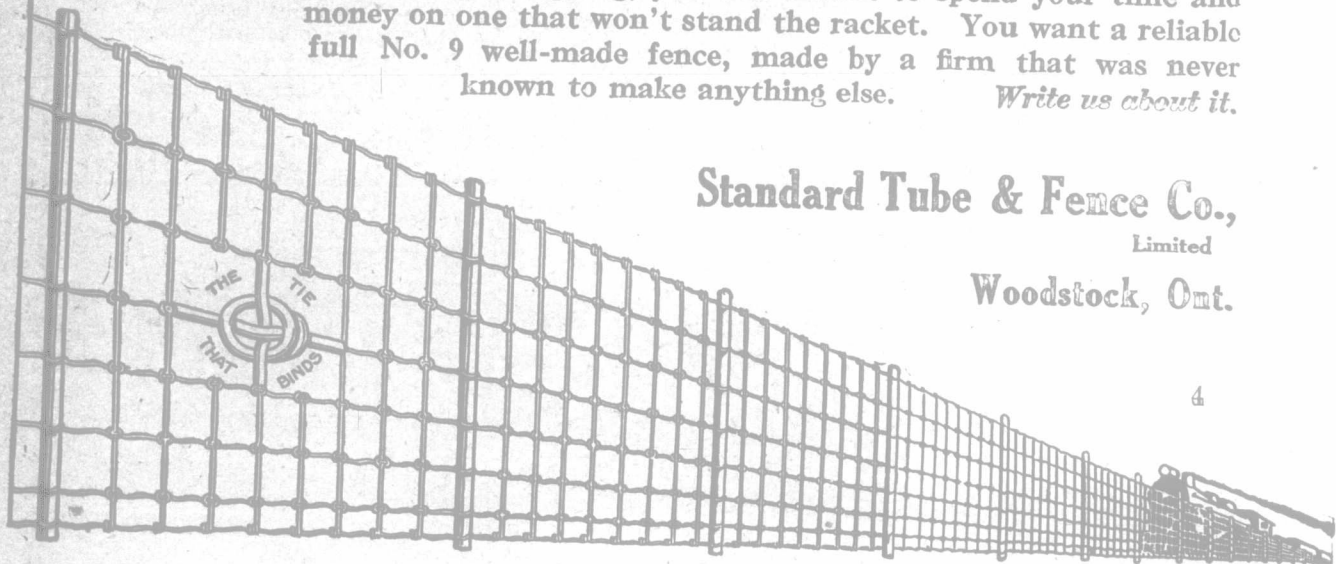
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failed all along in—what I should have been to her."

"But no, Barry," I said. "You've been—wonderful."

She would not hear of that. "I've helped with the work," she said, "but I owed that for my living and the freedom she gave me. It isn't that, Alan—Alan, my mother never loved me much. Perhaps I've been to blame."

"Surely she loved you," I argued. "Some people don't show their feelings," you know. She may have been one of them."

Barry withdrew her hand, and in the darkness I saw her bring her knees up and clasp her hands about them in the pensive attitude that I knew.

"She did not love me much," she repeated sadly. "She did well by me. She gave me clothes, and taught me to read, and to speak in the language of the—educated. My mother was an educated woman, Alan. I never could understand."

She hesitated, and I knew that her thought was mine.

"But your father"—I began.

"Yes, my father, too," she said. Yet I cannot understand. My mother never told me the story of their lives. I know nothing. To-night I feel like a little leaf blown out on a big grey sky with no anchorage anywhere.—If I knew anything of my mother's people—anything. But I do not."

"If you asked Mr. Deveril?" I suggested.

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"He knows no more than I," she said, quickly. "He does not care."

Again she sat silent for a long time, and the cricket chirped.

"This morning," she began, presently. "I took the key to lock the drawers of mother's bureau. One never knows, you know, what may happen when the house is open. Not that anyone would steal—but there might be meddlers."

I can't tell you why I did it, but I drew open one of the drawers. There was a little packet there, with my name written upon it. I have it here, Alan, hidden. If you will get a lantern I'll show it to you."

"You wish me to see it?" I asked, to make sure.

"I wish you to see it."

And so I hurried to the stables and came back with a lantern being careful to keep the tin side turned towards the tavern, so that no one might see and follow.

Barry arose as the light of it flashed upon her. "Come," she said, and I followed her into the thick of the trees.

At the end of a hollow log she sat down, and drew from it the little parcel bound in yellowed paper. So I sat down beside her and turned the light so that it would fall on her small brown hands.

Untying the string she thrust the parcel before me. I drew back the cover and there lay before me two tiny moccasins, beaded, such as Indian children wear. I took them up and turned them over and over, but there was neither word nor mark.

"Evidently my mother, in her younger days, had my liking for the Indians," said Barry, smiling a little, and taking them from me. "I wonder if ever I wore those," she went on. "Perhaps they left me my Indian moods."

"Now look at this," and she drew from the paper something wrapped in birch-bark, which she unfolded. I raised the lantern to see, and perceived the silhouette of a man's head and face, mapped in solid black on a little sheet of birch-bark—a fine head, with clear-cut features and hair that seemed to wave backward from a broad, high brow.

"There is no name," she said, "not a syllable. I wonder who he was? Some relative, surely, or this would not have been placed in a parcel addressed to me."

"Evidently," I said. "Keep this, Barry. Some day there may be a clue."

There was more talk, she going back to her fears that she had not been a more loving daughter else she had been more loved. "There always was a distance between us," she said. "Yet she was kind to me—very kind to me. The fault has been mine."

And then she began to brush away the tears that fell, and so we sat for a long time, and after a little I told her all of The Schoolmaster's sermon, to which she listened with interest, seeming to gain some comfort.

"Come," she said, afterwards. "I must go in. There'll be the wake, but I'm going to bed. There will be things to do to-morrow."

At the door we said good-bye, Old Meg there meeting her, and then I slipped away in the darkness and through the woods home.

Ever since I have been planning how I can take care of her if she will come to me. Soon I must ask her, for I cannot long bear this waiting.

(To be continued.)

The Dollar Chain

For maimed and blind Canadian soldiers.

Contributions from Jan 24 to Jan. 31: Mrs. H. Hamilton, R. 4, Pembroke, Ont., \$10 (contributed especially for Belgian Relief); "Nissouri Friend," \$2; "Scotia", London, Ont., \$1.

Previously acknowledged.....\$5,807.00

Total to Jan. 31.....\$5,820.00

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Some Pet Economies.
 (Continued.)

“As I was saying before I was interrupted,” remarked Mrs. Verner, smilingly appropriating to the occasion the words of the beloved “autocrat,” “you have quite the best ‘style’ to you of any girl in the neighborhood, and I do believe you spend as little money as any of them.—Of course,” smiling again, approvingly, “one has to make some allowance for figure, and walk, and that splendid hair of yours.”

“Oh, I know I’m not pretty,” laughed Hazel Euston, “but”—quite honestly—“Perhaps I have achieved a bit of that something called ‘style.’ Let me assure you it’s all due to forethought before I buy.”

“Yes,” said Mrs. Verner, interrogatively. “You see,” went on Miss Euston, “I never buy a thing without considering how it will look along with all the other things with which I shall have to wear it that season. If I chance to have a mahogany dress, for instance (Aunt Kate gave me one last winter) and a blue dress at the same time, I don’t buy a blue hat. I can afford to have only one hat, and so I choose black, that will look quite well with both dresses. . . . And I always pay particular attention to the lines of the things I wear. Positively it is the ‘line’ that counts, whether in coats, hats or dresses. Long lines suit me best, because I am not exactly of the thin and spirituelle type, you know, so I never choose designs that will make me look shorter and stouter—‘cut off,’ as mother says. . . . As I said before, I keep rather stubbornly to one color, or two at most. Blue and brown go best with my brown hair and blue eyes and particular brand of complexion, and so I rotate from the one to the other. Of course I get a bit tired of them at times. When I saw that dashing Patricia Heming from Montreal not long ago, in an evening dress of black panne velvet and tomato-colored Georgette I’d have given anything to have got one like it for myself. But then I remembered that the daringness—while the very thing with Patricia’s midnight hair and black eyes—would not suit me at all, and so my new ‘state occasions’ dress is, instead, Alice blue velvet, with a touch of steel beading on the Georgette vest.”

“Yes?” said Mrs. Verner again. “I’m afraid we’ve got away from economies,” laughed Miss Euston, “and yet it is economy to keep to one or two colors. One has to have ever so many more things if one does not,—or else go ‘higgledy-piggledy.’ Now there’s Daisy Pearse. She got in New York this winter, the loveliest prune-colored coat, something over three-quarters length. But the dresses she had to wear with it were olive green and navy blue. With these and a black hat she looked like a positive frump. And she soon knew it. So, then, last time she was in Toronto she got a prune-colored gown to match and the green and blue were left hanging in the closet. . . . But now, going back to real on-the-edge economies, have you ever noticed what an astonishing improvement deep white, cream or castor collars and cuffs make to an old dress? No?—Then let me tell you the shabbiest dress you have will look quite respectable if touched up that way, and worn with nice shoes and stockings. I know collars aren’t much in fashion just now, but they’ll soon come back; they’re too becoming to stay away long, and besides they keep the neck-band of one’s dresses so clean. I make all my own collars; it’s so much less expensive than buying. —Yes, all my own clothes, too, except my suits and long coats. I choose easy styles that I know I can manage, and get someone to help with the fitting and evening up from the floor. Some day I’m going to have an adjustable model, and then I’ll not have to trouble anyone. If there’s a touch of beading, or embroidery, or braiding to be put in I do that too, and draw the designs. It’s not hard to draw them if you remember, for braiding and beading, to make one-line designs—

not broken, you see—and repeat the motif at regular intervals to make the pattern symmetrical.—But, here comes Mrs. Carey. I told her to bring her Scrapbook of Recipes.

In a few moments Mrs. Carey formed a third in the little group swaying in rockers in Miss Euston’s cheery living-room.

“So I’m to ‘hold the floor’ while you two knit,” she said. “Well, I’ll do my best. How shall I start?”

“Tell us just how you economize in cooking,” said Mrs. Verner, stopping to pick up a stitch. “I know I’m very extravagant about it. I’m afraid I am in everything, but Hazel, here, has been giving me a few hints about clothes.”

Mrs. Carey was very comforting. “You know you’re so young, my dear,” she said. “You’ll learn. Not all of us are born economists, like Hazel, here. Most of us have to learn, little by little. . . . Now, how do I save in cooking? Well, I think I can truthfully say I don’t throw out a bowlful of anything in a year’s time. And my family’s well fed, too, for I believe the very thing farthest away from real economy is to feed one’s family poorly or insufficiently.”

“In the first place I try never to cook too much, unless it’s something like porridge than can be warmed over and be just as good as when freshly cooked. But, of course, with the very best planning there will always be a few left-overs.”

Mrs. Verner nodded. “That’s just it. Jack never will eat left-overs.”

Mrs. Carey laughed. “But, my dear, why do you let him know they are left-overs? Fix them up—camouflage them—then don’t say a word about a left-over! If you do, Jack is bound to get his imagination to work; he’ll taste ‘left-over’ in every mouthful. My Richard doesn’t know he ever ate one in his life. Only yesterday I served a meat souffle. I tell you, mother, that’s a fine dish for a raw night!” he said. And I never said ‘Boo’ about it’s being made up of a wee bit of meat, a few boiled beans, and a bit of boiled cabbage from the day before.”

“Beans, meat and cabbage! What did you do with them?” asked Mrs. Verner.

“Why put the meat through a chopper and the beans and cabbage through a potato ricer. Then I added some chopped onion and a little tomato to moisten and folded in the whites of a couple of eggs beaten stiff. Then I baked it and served it on a hot platter with hot tomato sauce around. I used the egg-yolks for making salad-dressing for next day.”

“You’re as much of a genius with cooking as Hazel is with clothes,” smiled Mrs. Verner. “Now will you tell me what you do with stale bread? Jack and I can’t manage to eat ours quickly enough to keep the last loaf from being too dry to be very palatable.”

“That’s an easily answered question,” returned Mrs. Carey. “Try dipping your last loaf in water, then put it in the roasting-pan, put on the cover and heat in a hot oven. It will come out almost like fresh bread. Stale buns and biscuits may be treated the same. . . . Pieces of dry bread may, of course, be made into a variety of puddings, and they make the very best pancakes. If you dry some of them in the oven, then pop them into a stout paper bag and roll them, you will have splendid crumbs for rolling croquettes in. I always keep a small sealerful in my pantry.”

“Have you any other ways besides the souffle for using up scraps of meat?” was the next question.

“Of course I have,” said Mrs. Carey, “and here they are,” taking up her Scrap Book.

(To be continued.)

Midwinter Cookery.

Baked Potatoes.—Baked potatoes contain all the food properties of these tubers, as nothing is drained away as when boiled. They should be used often in the winter, when fires are always on and the oven hot. Select potatoes of uniform size and nice clean skin, wash them well, scrubbing with a rough cloth or vegetable brush, then rub the skin with a little grease and bake an hour or more (depending upon the size of the potatoes) in a moderate oven. Before serving break each a little open to let the steam out. This will prevent the potatoes from becoming soggy as they cool. Baked potatoes are very nice for supper, served with cold meat and catsup.



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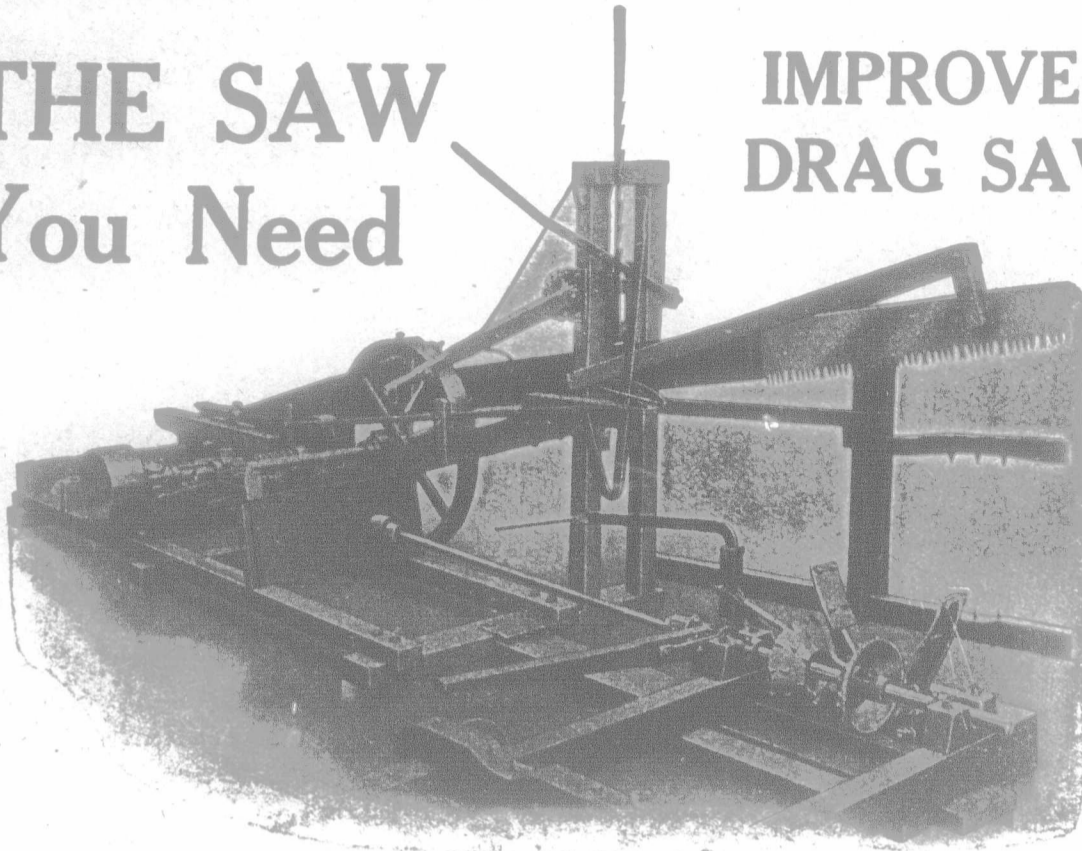
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HERD SIRES USED AS FOLLOWS :

Dairyman of Glenora (13479) first bull to qualify in Record of Performance. Haysmuir Milk Record (Imp.) (6716) (24822) with 17 qualified progeny.

Dairyman of Orkney (48686) senior herd sire, whose progeny for type and dairy qualities would be hard to find in R. O. P. work to date.

Sixteen cows have qualified with average of 10,302 lbs. milk, 410 lbs. butter-fat and 3.98% test. Four-year-old average 9,300 lbs. milk, 368 butter-fat and 4.04%. Seventeen 3-year-old average 9,490 lbs. milk, 381 butter-fat and 4.08%. Eleven 2-year-old average 8,863 lbs. milk, 364 butter-fat and 4.13%.

Catalogues ready about Feb. 15. Sale under cover. Apply to

Auctioneer:
WELBY ALMAS
Brantford

N. DYMENT & SONS
R. 4, Brantford, Ont.

Baked Beans With Tomato Sauce.—Soak 1 pint pea beans or kidney beans in cold water over night. In the morning drain and rinse well, then parboil until they may be pierced with a pin. Change the water during parboiling, adding a pinch of soda to the last water. Put half the beans into the bean-pot, and lay on top ¼ lb. salt pork, scalded a little, with the rind scraped and scored with a knife in half-inch strips. Turn in the rest of the beans. Mix 2 tablespoons molasses and 1 teaspoon each of mustard and salt, with hot water and turn over the beans. Next add a pint or more of canned tomatoes pressed through a sieve. Put the cover on the pot and bake about

8 hours. At the beginning of the last hour remove the cover and bring the pork to the top. If the liquid dries out before the last hour more tomato juice or boiling water must be added. Baked beans should be neither dry nor sloppy, with each bean whole yet tender. They will warm over splendidly, therefore a considerable quantity may be cooked at once. Keep any left over covered in a cold place. Baked beans are nicest when served as the main dish for supper.

Puffed Paprika Potatoes.—For this dish it is necessary to have on hand some paprika, which, you know, is a mild red pepper. A can of it should always

be kept in the house; it goes a long way and answers many purposes better than black pepper. Bake 5 potatoes, well scrubbed, until done. Cut a slice from the top of each and carefully scrape out the pulp leaving the skins whole. Press the potato through a ricer; add ½ teaspoon paprika, 3 tablespoons butter, 1 teaspoon salt, 2 or 3 tablespoons mashed canned tomato. Beat until light, then fold in the white of 1 or 2 eggs and beaten stiff. Fill the skins with this and bake in the oven until slightly browned. Serve with roast meat or hot baked fish.

Stuffed Canned Tomato.—Use, if pos-

sible, tomatoes that have been canned whole. Drain them, scoop out carefully, fill with the stuffing rolled into little balls, and bake on a buttered pan. If you have none whole use large pieces, drained. Put them in a buttered dish, put the stuffing above, cover with buttered craker or bread crumbs and bake.

Stuffing.—Mix together 1 cup soft bread crumbs, ¾ cup chopped cooked meat, ¼ cup melted butter, 1 teaspoon scraped onion, ½ teaspoon salt, ½ teaspoon paprika, and 1 tablespoon chopped parsley if you have it.

Current Events

Great Britain is in the grip of an industrial strike connected with many industries.

The number of British, French and American troops occupying the Rhine region is to be limited to 1,000,000.

Not one of the Russian Governments has so far consented to confer with the Allies on the Princes' Isles.

British and American troops in the Archangel district came into collision again, last week, with the Bolsheviks, who occupied Shenkursk, but, latter, were repulsed at Taresevo.

The Peace Conference at Versailles has accepted the principle of a League of Nations, and a committee of the following has been appointed to work out the details: British Representatives,—Lord Robert Cecil and Gen. Smuts; United States,—President Wilson and Col. House; French,—M. Bourgeois and Dean Larnaude; Italy,—Premier Orlando and Viterio Scialoja; Japan,—Viscount Chinda and K. Ochiai. Delegates from the small nations are also being named two for each. At present the conference is gradually wrestling its way through the many problems presented. It has been decided that Germany shall make reparation for all war damages, but that no extra war indemnities shall be collected; also that Poland, Bohemia and Serbia shall be free nations. None of the German colonies are to be given back, and their disposition is proving a knotty problem. Japan and Australia both laid claim to the German Islands in the Pacific; then President Wilson brought forward his plan for internationalization of all the German colonies; Japan withdrew but, at time of going to press Australia still holds out for her claim. China, on Jan. 28, put in an appeal for the relinquishment of Kiasochau, taken by Japan from Germany at the beginning of the War.

Dominion Bank Prospers in 1918.

The year 1918 was a prosperous one for the Dominion Bank, proof of which is to be found in the annual report submitted to the shareholders at the meeting held in Toronto on January 29.

At the close of 1918 the bank's total assets amounted to \$133,500,000, a gain for the year of \$24,000,000, but it is in the immediately available assets that the most striking result is to be seen. Under this particular classification there was an increase of \$5,800,000, which brought the item up to \$63,500,000, or sufficiently to meet 53 per cent. of the bank's liabilities to the public. Even the strictly cash assets are equal to 23.80 per cent. of the bank's liabilities to the public, the sum total being \$28,498,000, an advance for the year of \$1,160,000. The rest account, standing at \$7,000,000, exceeds the paid-up capital by the substantial sum of \$1,000,000. The net profits at the close of 1918 stood at \$1,086,498, a gain of \$81,435, over those of 1917. This net gain means a return to the shareholders of 8.35 per cent. on the total capital and reserve as against 7.73 per cent. for the previous year. In disposing of the net profits the following disbursements were made: Dividends at the rate of 12 per cent., \$720,000, contributions to patriotic and other benevolent funds, \$36,000, officers' pension fund, \$25,000, written off bank premises, \$250,000. The balance, \$446,503, was carried forward, a sum exceeding that brought forward at the close of 1917 by \$53,000.

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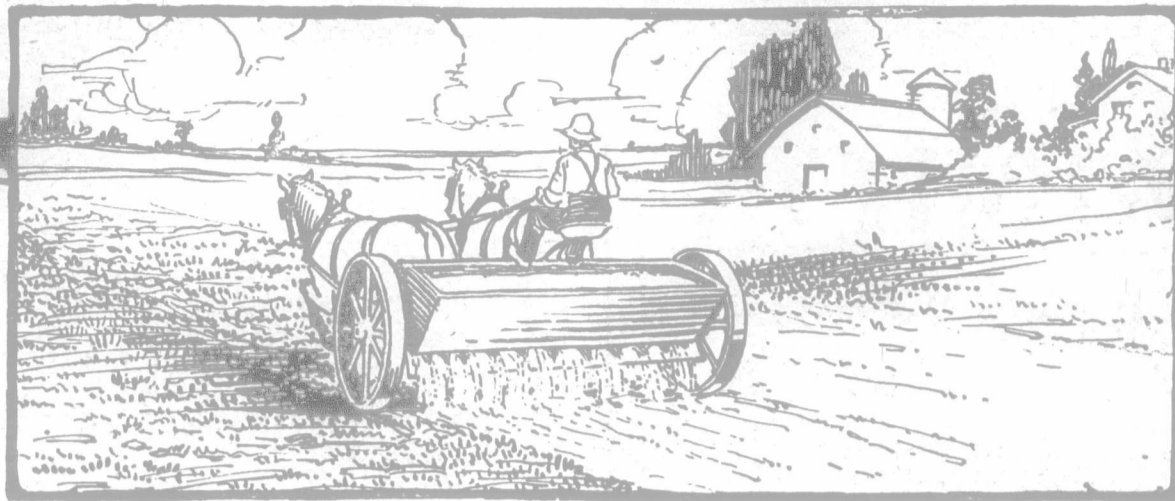
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Enrich your soil with Agri-lime the new Agricultural Limestone

AGRILIME is limestone which has been ground so fine as to have an active and beneficial effect on the soil to which it is applied.

The richer your soil in decayed vegetable matter, and the more thorough its cultivation, the more likely it is to develop an acid or sour condition. Unless there is sufficient lime in the soil to *neutralize* the acid formed by the decay of vegetable matter the productive value of the soil will steadily decline. The deficiency of lime must be supplied by the application of *Agri-lime*, the agricultural limestone.

Stiff clays and wet, low-lying and ill-drained soils are apt to become "sour" because there is no chance for the acid materials to drain away. Such soils should be first drained and then limed.

The highly cultivated soils of France and Belgium have retained their fertility through the regular use of agricultural lime, as well as of ordinary fertilizers.

Canadian Soils Need Agri-Lime

Government surveys conducted recently have disclosed the fact that the application of agricultural lime is necessary in many districts. In Ontario, a complete season's survey showed only one district where the soil would not have been benefitted by applying lime. In the great majority of cases, the soil examined was in *immediate* need of lime, in order to neutralize the acid condition.

Few, if any, of our farm crops can make the best growth in soils carrying a poor or insufficient quantity of lime. This is especially true of "legumes" and authorities claim that the frequent failure of clover to come through the first winter is due to lack of lime in the soil.

Agri-lime is a fine pulverized lime stone which will positively neutralize acidity in the soil. It does two things well. (1) In the case of a naturally "sour" soil it creates the strength and production which have been lacking; (2) In the case of an over-cultivated soil, it restores these qualities.

You can spread Agri-lime on your soil at almost any time. After plowing, is probably most suitable, but even in winter Agri-lime may be spread over a field, if the snow is not too deep.

You should know more about Agri-lime in the interests of better crops. Sign the coupon below, and we will send you without cost, our folder on Agri-lime, telling how to test your soil for acidity, how to apply Agri-lime, how much Agri-lime to apply and other facts about conserving the fertility of the soil.

Manufactured and sold only by the

Canada Cement Company Limited

901 HERALD BUILDING MONTREAL
 Sales Offices, Montreal - Toronto.



Send me your literature

Name _____

Address _____

THE DOMINION BANK

At the Forty-Eighth Annual General Meeting of the Shareholders of The Dominion Bank, held at the Head Office, in Toronto, on 29th January, 1919, the following Statement of the affairs of the Bank as on the 31st December, 1918, was submitted:

PROFIT AND LOSS ACCOUNT.

Balance of Profit and Loss Account, 31st December, 1917.....		\$303,004 84
Profits for the year, after deducting charges of management and making full provision for bad and doubtful debts.....	\$1,169,798 38	
Less		
Dominion Government War Tax (on circulation).....	\$60,000 00	
Taxes paid to Provincial Governments.....	23,300 00	
	83,300 00	
Making net profits of.....		1,086,498 38
		<u>\$1,479,503 22</u>
Which amount has been disposed of as follows:		
Dividends (quarterly) at Twelve per cent. per annum.....	\$720,000 00	
Contribution to Toronto and York Co. Patriotic Association and Canadian Red Cross Society.....	\$25,000 00	
Contribution to Navy League of Canada.....	10,000 00	
Contribution to Catholic Army Huts Campaign.....	1,000 00	
Contribution to Y. M. C. A. Red Triangle Fund.....	2,000 00	
	38,000 00	
Contribution to Officers' Pension Fund.....	25,000 00	
	783,000 00	
Written off Bank Premises.....	250,000 00	
	1,033,000 00	
Balance of Profit and Loss Account carried forward.....	446,503 22	
		<u>\$1,479,503 22</u>

GENERAL STATEMENT

LIABILITIES.		
Capital Stock paid in.....		\$6,000,000 00
Reserve Fund.....	\$7,000,000 00	
Balance of Profit and Loss Account carried forward.....	446,503 22	
Dividend No. 145, payable 2nd January, 1919.....	180,000 00	
Former Dividends unclaimed.....	3,600 00	
		<u>7,630,193 22</u>
Total Liabilities to Shareholders.....		\$13,630,193 22
Notes in Circulation.....	9,858,533 00	
Due to Dominion Government.....	11,000,000 00	
Deposits not bearing interest.....	\$33,843,584 77	
Deposits bearing interest, including interest accrued to date.....	62,264,126 61	
	96,107,711 38	
Balances due to other Banks in Canada.....	1,131,994 04	
Balances due to Banks and Banking Correspondents elsewhere than in Canada.....	1,002,534 64	
Bills Payable.....	86,520 00	
Acceptances under Letters of Credit.....	305,616 76	
Liabilities not included in the foregoing.....	383,171 94	
Total Public Liabilities.....		<u>119,876,081 76</u>
		<u>\$133,506,274 98</u>
ASSETS.		
Gold and Silver Coin.....	\$ 1,940,780 53	
Dominion Government Notes.....	13,473,468 00	
Deposit with Central Gold Reserves.....	4,600,000 00	
Notes of other Banks.....	1,037,315 49	
Cheques on other Banks.....	4,995,232 10	
Balances due by other Banks in Canada.....	7,779 15	
Balances due by Banks and Banking Correspondents elsewhere than in Canada.....	2,443,405 46	
	\$28,497,980 73	
Dominion and Provincial Government Securities, not exceeding market value.....	9,966,508 15	
Canadian Municipal Securities, and British, Foreign and Colonial Public Securities other than Canadian, not exceeding market value.....	13,009,830 54	
Railway and other Bonds, Debentures and Stocks, not exceeding market value.....	2,376,325 95	
Call and Short (not exceeding thirty days) Loans in Canada on Bonds, Debentures and Stocks.....	8,408,800 29	
Call and Short (not exceeding thirty days) Loans elsewhere than in Canada.....	1,269,403 93	
	\$ 63,528,843 59	
Other Current Loans and Discounts in Canada (less rebate of interest).....	64,092,006 46	
Other Current Loans and Discounts elsewhere than in Canada (less rebate of interest).....	26,782 18	
Liabilities of Customers under Letters of Credit, as per contra.....	305,616 76	
Real Estate other than Bank Premises.....	11,470 43	
Overdue Debts, (estimated loss provided for).....	85,605 91	
Bank Premises, at not more than cost, less amounts written off.....	5,128,854 04	
Deposit with the Minister of Finance for the purposes of the Circulation Fund.....	304,500 00	
Mortgages on Real Estate sold.....	22,589 61	
	69,977,425 39	
		<u>\$133,506,274 98</u>

E. B. OSLER, PRESIDENT.

C. A. BOGERT, GENERAL MANAGER.

AUDITORS' REPORT TO SHAREHOLDERS.

We have compared the above Balance Sheet with the books and accounts at the Chief Office of The Dominion Bank, and the certified returns received from its Branches, and after checking the cash and verifying the securities at the Chief Office and certain of the principal Branches on December 31st, 1918, we certify that, in our opinion, such Balance Sheet exhibits a true and correct view of the state of the Bank's affairs, according to the best of our information, the explanations given to us and as shown by the books of the Bank.

In addition to the examinations mentioned, the cash and securities at the Chief Office and certain of the principal Branches were checked and verified by us at another time during the year and found to be in accord with the books of the Bank.

All information and explanations required have been given to us, and all transactions of the Bank which have come under our notice have, in our opinion, been within the powers of the Bank.

G. T. CLARKSON } of Clarkson, Gordon &
R. J. DILWORTH } Dilworth, C.A.

TORONTO, January 21st, 1919.

"Empire" Barn Plans

FREE Barns - Implement Sheds - Store Houses etc. **FREE** No Obligation Our Service is free

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—help in a real and practical way— help you to build a modern Barn, a roomy Barn, and an economical, fire-proof Barn. And our help is free. We cannot tell you all about it here. Drop us a card asking for our

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TORONTO and WINNIPEG

Manufacturers of the famous Eastlake Shingles, Empire Corrugated Iron, Ventilators, Roof-Lights, Hog Troughs, Stock Tanks, etc., etc.

Gossip

Sale Dates.

- Feb. 6, 1919.—Thos. L. Mercer, Markdale, Ont.—Shorthorns.
- Feb. 6, 1919.—Lambton County Stock Breeders' Dispersion Sale, Petrolia, Ont.; W. P. Macdonald, Secretary.
- Feb. 7, 1919.—J. J. Elliott, R. R. 4, Guelph, Ont.—Shorthorns.
- Feb. 7, 1919.—Canadian Hereford Breeders' Association, Toronto, Ont. H. D. Smith, Secretary, R. R. 1, Ancaster, Ont.
- Feb. 8, 1919.—A. & G. Forbes, R.R. No. 2, West Montrose, Ont.—Shorthorns and Leicester Sheep.
- Feb. 12, 1919.—Reuben S. Waite, Lot 11, Con. 4, Cramahe.—Shorthorns.
- Feb. 20, 1919.—T. J. Spaulding, Aurora, Ont.—Jerseys.
- Feb. 26, 1919.—N. Dymont & Sons, Brantford, Ont.—Ayrshires.
- March 3 and 4, 1919.—Union Stock Yards, Toronto, Ont.—Horses.
- March 5, 1919.—Guelph Fat Stock Club, Guelph, Ont.—Pure-bred Stock.—J. M. Duff, Secretary.
- March 5, 1919.—Elsworth Plant, Burford, Ont.—Holsteins.
- March 6, 1919.—Bruce County Breeders' Club, Walkerton, Ont.—Shorthorns.—N. C. McKay, Secretary.
- March 6, 1919.—Irwin McMahan, Hawkstone, Ont.—Shorthorns.
- March 6, 1919.—Caledonia Shorthorn Breeders' Consignment Sale.—Shorthorns. H. A. Scott, Secretary.
- March 12, 1919.—Perth District Holstein Breeders' Club, Stratford, Ont.—A. C. Park, Secretary.
- March 13, 1919.—London District Holstein Breeders', London, Thursday.
- March 13, 1919.—Wm. T. McCormick, R. R. No. 1, Paris, Ont.—Shorthorns, Horses, etc.
- March 18, 1919.—A. Hughes & Son, Sarnia, Ont.—Jerseys.
- March 19, 1919.—W. B. Poole and A. Groves, R. R. No. 5, Ingersoll, Ont.—Holsteins.
- March 19, 1919.—Oxford Holstein Breeders' Club, Woodstock, Ont.—W. E. Thomson, Sec.—Treas.
- April 3 and 4, 1919.—Western Canada Shorthorn Show and Sale, Brandon, Man.

Coming Events.

- Jan. 14—March 29.—Short Courses at Ontario Agricultural College.
- Jan. 29—April 11.—Short Courses at Kemptville Agricultural School.
- Feb. 12.—Ayrshire Breeders' Annual Meeting, Montreal.
- Feb. 5—6—7.—Ontario Horticultural Association Convention, Toronto.

WANTS & FOR SALE

CORRESPONDENCE IS INVITED FROM any young farmer who desires employment in Saskatchewan, with the possibility of subsequently renting and finally purchasing the farm. Must be an energetic worker, of good character, good horseman, considerate of live stock, and capable of managing during employer's absence. To the right man profitable deal will be offered, with the chance of future ownership. Address: T. E. Jackson, Fir Ridge, Sask.

FOR SALE—200 ACRE FARM, FIRST-CLASS condition, buildings included. Apply F. H. Orris, Box 142, Springfield, Ont.

FOR SALE—MAGNIFICENT STOCK FARM; fine soil, land gently undulating; superior buildings, modern labor saving appliances; broad, unbroken fields; hardwood bush; delightful location, easy distance to churches and schools. Intending purchasers should write direct to S. G. Read & Son, Limited, Brantford, Ont.

MAN AND WIFE, EXPERIENCED, DESIRE position on up-to-date farm, wife as house-keeper. L. Hurley, General Delivery, Toronto.

SEVERAL ANGORA DOES AND BUCKS for sale. For particulars address J. Clarke Reid, Mgr., Isleigh Grange Stock Farm, Danville, P.Q.

WANTED—MAN WITH SOME EXPERIENCE to assist on hundred-acre farm. Apply, stating wages expected and experience, to C. Noel, Meadowdale, Ont.

CLEARING SALE

of 16 Pure-bred

Shorthorns

and Five Grades

Golden Broadhorns (imp.) 115134, at head of herd.

There are 5 cows (pure-breds) due to freshen before 1st March, all bred to Golden Broadhorns (imp.). There are two young bulls of the herd-sire sort. They are all a choice lot, and represent such families as Glosters, Broadhorns, Mayden, etc. I am also selling farm, implements, horses, etc., as I am giving up on account of ill-health.

Lot 11, Con. 4, Cramahe, 5 miles from Brighton, on

Feb. 12th, at 1 o'clock sharp

Trains will be met at Brighton, G. T. R. Nine months' credit on bankable papers.

REUBEN S. WAITE, Colborne

February 11 to 14.—Ontario Corn Exhibition, Chatham, Ont.

February 13—14.—Ontario Association of Fairs and Exhibitions, Toronto.

Feb. 18—19—20.—Ontario Fruit Growers' Association Convention, Toronto.

Genuine *Ford* Parts

cost less than the imitation

Genuine Ford parts are sold everywhere at prices fixed by the Ford Company.

The same prices are usually charged for imitation or "spurious" repair parts.

Yet "spurious" parts are, as a rule, made from low grade steel. They are not produced under rigid Ford inspection. They are inferior in quality and workmanship.

Then, when you buy "spurious" parts, you do not get the same value for your money.

But that is not the only loss to the Ford Owner.

It costs more to repair with the imitation parts. They are not made to fit with the fine accuracy of the genuine parts made in the Ford plant. It takes more hours of labor at a high rate per hour to fit "spurious" parts into the car.

Repairs with the imitation parts must, in most cases, cost more than authorized Ford Service with genuine Ford parts.

You pay more for the imitation without getting the satisfaction that you know you will get from the genuine. You incur the risk of damage to other parts of your car from the inferior repairs. You weaken your Ford. You invite repeated trouble and expense.

There is no need now to accept anything but the genuine Ford parts.

**Genuine *Ford* Parts
For Sale Here**

Look for
this new
Service
Sign

**You can now demand genuine Ford parts from
any reliable garage rendering Ford Service**

Authorized Ford Service will be obtainable everywhere—not only from our 800 Ford Dealers—but from over 2,000 other good garages in Canada.

Wherever you see the New Ford Service sign you can obtain genuine Ford parts.

Remember that the Ford Company cannot be held responsible for the performance of a Ford Car repaired with "spurious" parts. To keep in force the Ford Warranty behind your car, it is essential that you do not allow "spurious" parts to be used in repairing it.

Demand the genuine. Look for the Ford Service Sign.

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Delivery, Toronto.

DES AND BUCKS
dress J. Clarke Reid,
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arm. Apply stating
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Golden Broadboks
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clock sharp

on, G. T. R.
table papers.

E, Colborne

Ontario Corn

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Toronto.

rio Fruit Grow-

ion, Toronto.

The Basis of Profitable Dairying

The influence of feed on the production of milk is striking. No matter how good the individual dairy cow is, the quantity of milk she yields is, within wide limits, directly dependent upon the feed she receives.

If a cow is subjected to feed of poor quality, unpalatable and indigestible, no matter how much she may be fed, she is sure to go away down in her production and will not yield any profits. Such a cow becomes a "boarder"—that is why our experts have compounded a mixed feed, properly balanced according to the needs of the dairy cow, rich in milk-producing nutrients, with a high percentage of these nutrients in digestible form.

Monarch Dairy Feed

a rich feed, but not too concentrated to feed alone and when fed liberally to dairy cows it will get the highest production possible with the least cost. There is no wastage in Monarch Dairy Feed—every pound has milk-producing value in it and more of it goes to the actual production of milk than of other feeds because such a high percentage of it is digestible.



Monarch Dairy Feed is composed of Oil Cake Meal, Cotton-seed Meal along with Bran, Barley feed and Corn feed. The mixture of Oil Cake and Cotton-seed Meals counteracts the constipation that would be caused by Cotton-seed Meal if fed alone.

Give Monarch Dairy Feed a trial and if the dealer in your district does not handle it, send us his name and we will see that you get it. By ordering early you will assure delivery when needed.

The Campbell Flour Mills Co., Ltd., Toronto, Peterboro, Pickering

Canada Food Board Licenses Nos. 6, 7 and 8.

52

EVERLEA FARM SEED CORN

White Cap Yellow Dent and Wisconsin No. 7, rack dried, seed corn, grown from Ontario seed. A guaranteed germination of 95% or better. Price, \$3.75 (three dollars and seventy-five cents) per bushel of 70 lbs. of ears. Farm Club orders especially solicited. Freight prepaid on orders of 10 bushels and over. Bags furnished.

F. C. BUTTS & SON
R. R. No. 2 Essex, Ontario

Seed Corn

Highest Quality.
Germination Guaranteed.

Wisconsin No. 7, White Cap Yellow Dent and Yellow Dent, selected from Essex County's best crops. Write and see how much a three-cent stamp will save you.

J. A. MUNGER, Harrow, Ontario

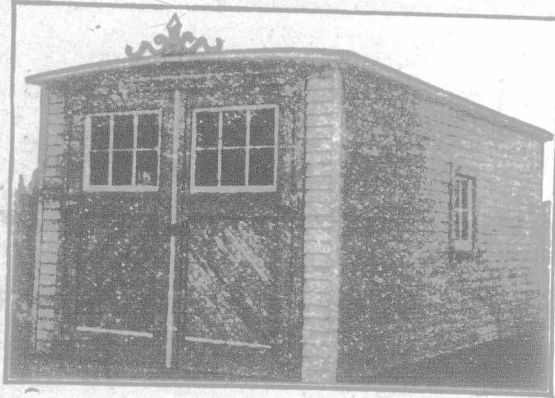
SEED CORN

We have all the different varieties at the lowest prices. Special prices to club orders and car lots. Satisfaction guaranteed.

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Seed Corn—A quantity of Select Early Leaming, Longfellows, Wisconsin No. 7 and White Cap Yellow Dent. A card will bring full particulars.
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The Auto-Home Garage



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A. COATES & SONS
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QUALITY COUNTS

What about that new house you've waited four years to hold? Of course you'll want

MILTON BRICK

So get your order in now for early sleighing.

MILTON PRESSED BRICK CO., LIMITED

Head Office: MILTON, ONT. Toronto Office: 50 Adelaide St. W.

When writing advertisers please mention Advocate.

The Coming of Peace.

As I sit down to write this article the news is coming over the wire that Germany has surrendered and an armistice is declared. I have been trying to imagine what it will all mean. So used have we become to the state of war that it has almost become normal with us. It will be hard for us to realize that peace is really here.

Yet, as the tension under which we have all been laboring relaxes, there will come a sense of great relief and we shall gradually come to an understanding of what has been accomplished and an appreciation of what has been lost and gained for mankind.

The first feeling will be one of rejoicing. Those of us who have loved ones at the front will be able to lie down in the full assurance that barring sickness they will be returned to us. Who can measure the gladness there will be in the mother heart of the world. And even those whose sons, husbands and brothers will never return will rejoice, for they will be glad that others will be spared the pain which has been theirs. The whole atmosphere will be charged with the spirit of expectation in anticipation of the great homecoming and reunion.

The second feeling will be one of sadness at the great loss which the world has sustained. The youth—not only our own—but of almost every land have been slain, have been devoured in the jaws of the insatiable monster—WAR. It is an irretrievable loss. The children which might have been theirs will never come and gladden the world. The genius which might have ripened to fulfillment will never be known. The inventions, books, works of art, scientific discoveries which might have come to humanity may never come to light. Humanity will never know what the war has cost. It will never know what the war has caused us to lose.

Yet, if the war has accomplished what it set out to fulfil, it will have sobered us into a sense of the responsibility which is ours. There is a little poem which tells us that if we break faith with those who have died, they will not sleep; even though the poppies bloom in Flanders fields. It has been used with great effect for election purposes and for raising the Victory Loan. But there is a deeper sense in which it is possible for us to break faith. I ask, "Why have the youth of the world died? Why have they poured out their rich young lives on foreign plains? Why have they gone forth to war and the supreme sacrifice?" Some lured by the spirit of adventure, some by the pressure of circumstances, but the greater number of them by the consciousness of duty, and the great hope that this would be the last war; and all of them were told by statesmen and leaders that this was the supreme purpose for which the war was fought.

It is here that there lies the greatest danger of breaking faith. After it is all over there will be the temptation to sink back into the old ways of life and thought. Fortunes will have to be recuperated, business revived, industry reconstructed, and the work of material reorganization will be so great that the possibilities are that it may absorb all our energy.

Then the tragic fact—although not without its blessings—is that humanity so soon forgets. In a period of poignant suffering, it would appear that what transpires would remain with us as an eternal remembrance. But it is not so. Memory has to be nourished and kept alive if it is to endure; otherwise it becomes as a slate washed by the tide of circumstance. Hence it is essential that we should take those means that will keep fresh within our thoughts the solemn purposes for which the great sacrifices have been made.

"Be with us yet,
Lest we forget, lest we forget."

In this connection one recalls those words of Lincoln in memory of those who had fallen on the field of Gettysburg.

"It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave their last full measure of devotion—that we highly resolve here that these dead shall

g of Peace.

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FROST BITES

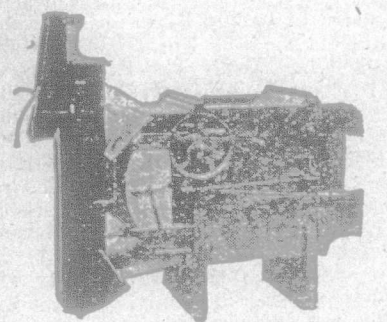
Amputation averted by prompt use of Egyptian Liniment

Frost bites are difficult to cure. Nevertheless Egyptian Liniment has proved invaluable in such cases by its healing and positive action. Take the case of Mr. W. T. Charlton, of Waterville, Quebec. Both of Mr. Charlton's feet were frozen so badly that mortification set in. Doctors advised amputation but he preferred, however, to save them. After trying many remedies without success, he tried Douglas' Egyptian Liniment. Improvement was so noticeable after the first application that he at once sent for two more bottles. These helped him so that he was able to move about a little. The third bottle cured him completely.

Don't take chances with chilblains or frost bites this winter. Keep a bottle of Egyptian Liniment handy for emergencies. You'll find it effective also for burns, scalds, cuts, bruises, sore throat and chest, neuralgia, etc.

35 Cents a Bottle
For sale by all dealers.

Douglas & Company
NAPANEE ONTARIO



The Kline Mill

Sold at Auction after Inventor died, when new ones could be got, at Twice the Price of new ones To-day. The Public thought they would not get any more Kline Mills, in vicinity of Beeton and near towns. It is the only mill that weighs and grades grain. In separating wild oats has no Comparison. Capacity One Hundred bushels an hour; also power attachment. Easiest mill to turn made. Write for particulars.

Kline Fanning Mill Co., Beeton, Ontario

The "Monarch" FANNING MILL



Endorsed by The Seed Growers' Association of Canada; also by Dept. of Agriculture, Nova Scotia.

Get Our Factory to Farm Prices.
Mississippi Iron Works
Almonte, Ont.
ESTABLISHED 1875

Cream Wanted

Ship your cream to us. We pay all express charges. We supply cans. We remit daily. We guarantee highest market price.

Ontario Creameries, Limited
London, Ontario.

PATENT YOUR INVENTIONS

Send direct to Ottawa for free patentability report and booklet "Patent Protection." Clients' patents advertised in the "Patent Review."
Harold C. Shipman & Co., PATENT ATTORNEYS
CENTRAL CHAMBERS, OTTAWA, CANADA.

WILL. T. BAKER, Live Stock Breeder and a speciality. Sales conducted anywhere.
Address: Oshawa or Hampton.

not have died in vain—that this nation, under God, shall have a new birth of freedom and that government of the people, by the people, for the people, shall not perish from the earth."

We are hoping the world will have received a new birth of freedom.

We are hoping that humanity will have a regenerated heart and mind.

We are hoping that international jealousies and wars shall cease.

But I repeat that with the coming of peace—

"IT IS FOR US THE LIVING TO BE DEDICATED TO THE UNFINISHED TASKS WHICH OUR BELOVED DEAD HAVE BEQUEATHED UNTO US.

DR. HORACE WESTWOOD.

Gossip.

The Edgeley Herd of Jerseys.

There is perhaps no pure-bred dairy herd in Canada to-day whose reports in the R. O. P. work are more closely followed by all breeders and dairymen than are those of the Edgeley herd of pure-bred Jerseys, owned by Jas. Bagg & Sons of Edgeley, Ont. There are but few breeders of any dairy cattle who are not familiar with the yearly record of Sunbeam of Edgeley, the champion butter cow of Canada. This record she has held for four years and while it will, no doubt, be beaten at some future time it is seldom the margin on a championship record is sufficiently large to enable it to stand so long unbroken. It will also be remembered that at the Guelph dairy Test in 1916 "Sunbeam" also led the three-day Dairy Test, carrying off the championship for that year by a score which we understand is still unequalled in any similar test conducted in the province. Here we might add that at Guelph for the years 1916, 1917 and 1918 the herd has with one exception won all first awards in the Jersey division; the exception being in the 3-year-old class in 1916 when they had no entry in this section. In regular Record of Performance work, nearly every female of milking age has at some time during the past five years qualified with exceptionally good margins, a number making Canadian records in their respective classes. There are at present a number of young bulls in the stables from these high-record dams all of which are advertised for sale elsewhere in this issue. Noticeable among them is a 12-months bull from Queen Greta, the highest scoring two-year-old at Guelph in 1917. She also won the three-year-old test in 1918. Another calf is an eight-months youngster from Edgeley's Noble Lily which has nearly 500 lbs. of fat for the year. Fanny of Edgeley the highest scoring Jersey at Guelph last December has a two-months bull and all are sired by the senior herd sire, Edgeley's Bright Prince, which is a son of Sunbeam of Edgeley. We might add here that the two nearest dams of the first mentioned calf average 800 lbs. of butter for the year in Record of Performance test. These are only a few of the higher-record calves now advertised but there are several more that are sufficiently well-backed to warrant their use in the best of herds. The younger females are in most cases of practically the same breeding as the bulls and for use on these, Messrs Bagg's have recently imported from a leading United States herd the young bull Financial Raleigh King. He is at present a real promising youngster being calved in July 1917.

No More Use for Him.

An Irishman came into the office of the president of the Illinois Central Railroad and said:

"Me name's Casey. Oi worruk out in th' yar-r-ds. Oi'd loik a pass to St. Louis."

"That is no way to ask for a pass," said the president. "You should introduce yourself politely. Come back in an hour and try it again."

At the end of the day back came the Irishman. Doffing his hat, he inquired:

"Are yez the man I saw before?"

"I am."

"Me name is Patrick Casey. Oi've been workin' out in th' yar-r-ds."

"Glad to know you, Mr Casey. What can I do for you?"

"Oi've got a job an' a pass to St. Louis on th' Wabash. Yez can go to hell!"



THE SOLDIER SETTLEMENT BOARD CANADA

A New Hand Book

GIVING INFORMATION REGARDING

LAND, LOANS and AGRICULTURAL TRAINING for RETURNED SOLDIERS

AND OUTLINING THE PROCEDURE FOR MAKING APPLICATION FOR THE BENEFITS TO BE DERIVED UNDER

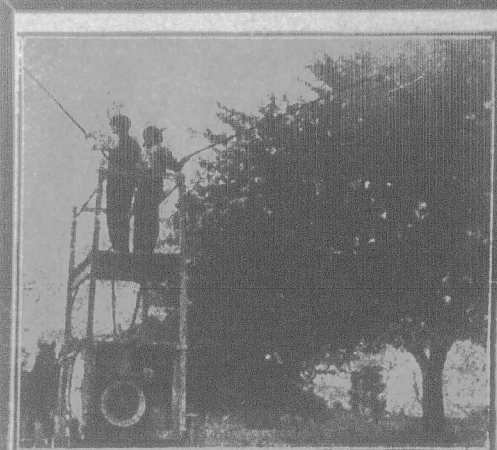
The Soldier Settlement Act

IS NOW AVAILABLE FOR DISTRIBUTION.

Prospective soldier settlers may obtain copies of the same upon application to the PROVINCIAL SUPERVISOR OR THE SOLDIER SETTLEMENT BOARD, OTTAWA.

PROVINCIAL SUPERVISORS.

- | | |
|--|--|
| D. W. Campbell, The Soldier Settlement Board, Post Office Building, Winnipeg, Man. | J. J. Threlkeld, The Soldier Settlement Board, Pemberton Building Victoria, B.C. |
| F. Dunlop, The Soldier Settlement Board, McCallum-Hill Building, Regina, Sask. | B. F. Campbell, The Soldier Settlement Board, Drummond Building, Montreal, Que. |
| F. W. W. Fane, The Soldier Settlement Board, Post Office Building, Edmonton, Alta. | The Hon. Murdoch McKinnon, Minister of Agriculture, Charlottetown, P.E.I. |
| W. M. Jones, The Soldier Settlement Board, 32 Adelaide St. E., Toronto, Ont. | W. B. McCoy, Secretary, The Soldiers Aid Commission, Halifax, N.S. |
| | William Kerr, Secretary, Farm Settlement Board, St. John, N.B. |



Spraying for Dollars, with a

Spramotor

It isn't a SPRAMOTOR unless we made it.

IF YOU protect your orchards and row crops from disease and pests, you will realize a quick reward, for they'll return you big thanks that very season, in greatly increased crops.

You take no chances when buying a Spramotor. This is the machine that met and beat the world at Government Spraying Contests and Expositions, carrying off over a hundred Gold Medals and First Awards. Why be content with half crops, quarter crops or less, when with a Spramotor you can double and treble the yield. We make outfits of all kinds, sizes and uses. Write for catalogue and free booklet on "Crop Diseases."

B. H. HEARD, SPRAMOTOR
5053 King Street
London - Canada

IMPORTANT:
Owing to the uncertainty of the markets in raw materials, please arrange to place your order NOW for Spring delivery, if you want to be sure of getting a machine.

LLENROC STOCK FARM.

\$250 Your Opportunity \$250

A baby son of our 38-lb. sire and from a 10.47 Sr. 2-year-old. Her dam is now on test, with over 25 lbs. and milking close to 90 lbs. He was born Jan. 1, 1919, and is out of a family of great type and fine production. He is 75% white. His 6 nearest dams average 27.75. Hurry, before it is too late.

W. C. HOUCK - R.R. 1, Chippawa, Ontario
ON THE BOULEVARD OF THE BEAUTIFUL NIAGARA RIVER.

Oak Park Farm Yorkshires

We have for sale a number of choice young pigs, either sex, of the improved type, majority about 3 months old. These are priced to sell and we guarantee satisfaction. Write at once.

Oak Park Stock Farm Paris, Ontario H. H. Bailey, Manager



New Tractor Facts

In This Free Booklet

How to make comparisons
How to get the most for your money

No farmer should try to decide which tractor is best until he has studied the latest offerings of the J. I. Case Threshing Machine Company, builders of power farming machinery for 77 years.

We have just published a handy little pocket manual which describes Case Kerosene Tractors and which gives a man the needed information by which he can make comparisons. This is the only way to get the facts.

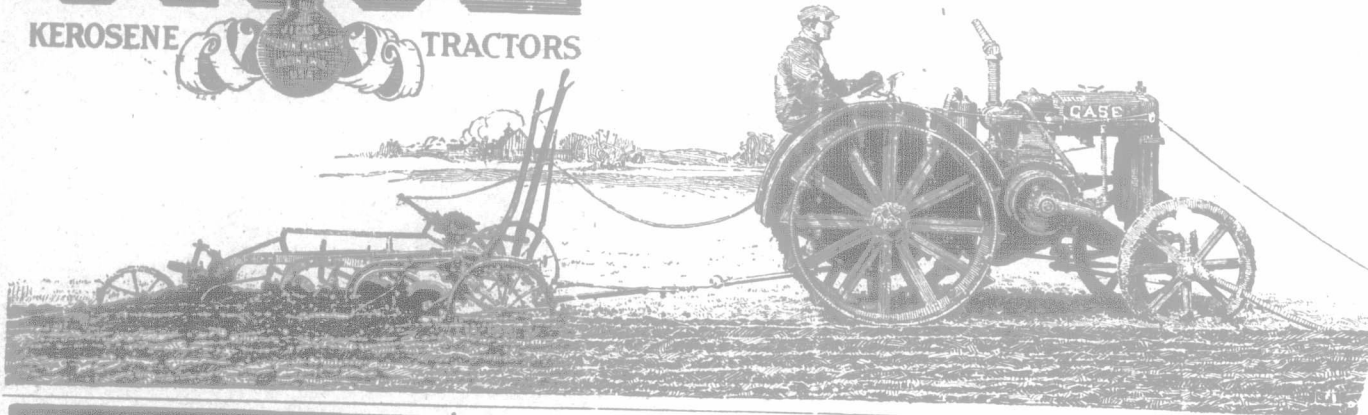
Our two new sizes, the Case 10-18 and the Case 15-27, both bring betterments and finer materials — items which mean much to performance and long life.

Read Before You Decide

Learn about our one-piece main frame. Our four-cylinder engines. Our conservative rating for belt and draw-bar work. Note how many operations these tractors can be used for. Examine the pictures of working parts. Note the fine materials. Such as traction gears of cut steel, enclosed and running in oil. See how we have placed the belt pulley directly on the crank shaft. Study the Case air washer and the thermostat control of cooling system. Learn these and other vital facts. Then compare Case Tractors with others. See if you can find elsewhere all we offer. Your search, we are sure, will result in your decision that Case builds the finest, and that "It's Better to be Safe than Sorry."

J. I. CASE THRESHING MACHINE COMPANY, Inc.
Founded 1842 1682 Erie St., Racine, Wis., U.S.A.

The Canadian Fairbanks-Morse Co., Limited
Toronto, Ont.; Montreal, Que.; Ottawa, Ont.; St. John, N. B.



FEEDS

COTTON SEED MEAL
(38 1/2% Protein)
We can now fill all orders for this high grade dairy feed. Get our prices on car lots or less.

SEEDS
Get your orders in early. Our usual High Grade Field and Garden Seeds in Packets and Bulk are now ready. Get our prices on Ontario High Grade Seed Corn, Marquis Wheat, Oats, Barley, Peas, etc. We also handle—
Linseed Oil Cake Meal, Corn Oil Cake Meal, Gluten Feed (23% Protein), Bran, Shorts, Feeding Corn Meal, Sugar Beet Meal, Corn and Barley Chop, Schumacker, Stock Feed, etc.

POULTRY FEEDS
Ask for our list of Poultry Feeds and supplies. We can usually save you money.

CRAMPSEY & KELLEY
DOVERCOURT ROAD, TORONTO

The Song of Welcome—Sung from Coast to Coast
When Our Soldier Boys Come Home
Words and Music by George B. Clarke
With excellent arrangement by Jules Brazil
SPLENDID WORDS—STIRRING MELODY
Postal note for thirty cents, with one cent stamp for postage secures a copy.
GEORGE B. CLARKE
28 Grosvenor St. Toronto, Canada
Patent Solicitors—Fetherstonhaugh & Co. The old-established firm. Patents everywhere. Head Office: Royal Bank Buildings, Toronto. Ottawa Office: 5 Elgin St. Offices throughout Canada. Booklet Free.

Every Farmer Wants the Best

Possible returns for his

CREAM

We offer you accurate tests and best market price.

WE SUPPLY CANS.

Ship your Cream to

Lindsay Creamery Limited
LINDSAY, ONTARIO

NORTHERN ONTARIO

Millions of acres of virgin soil, obtainable at 50c an acre in some districts—in others free—are calling for cultivation.

Thousands of farmers have responded to the call of this fertile country, and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you. For full particulars as to terms, regulations and settlers' rates, write to:

H. A. MACDONELL, Director of Colonization, Parliament Buildings, Toronto, Ont.
G. H. FERGUSON, Minister of Lands, Forests and Mines.

Gossip.

Nonpareil Ramsden Sold.

When requesting a change in advertisement Kyle Bros. of Dumbo write that two bulls previously advertised have been sold. J. D. Ferguson & Sons, St. Thomas, secured Nonpareil Ramsden 83422 which has been used for five years in the Drumbo herd with marked success. F. T. Shepherd, Pembroke, got Village Ramsden 122762. This is an extra good yearling and he should do well for his purchaser.

The Springfield Herd at Bellwood.

Aberdeen-Angus breeders who are in need of a choice bull to head their herd or a female or two to strengthen their breeding herd should note the offering advertised elsewhere in this issue by Kenneth C. Quarrie of Springfield Farm near Bellwood, Ont. The young bulls referred to are all sired by Mr. Quarrie's own herd sire Middlebrooke Prince 5th and are one of the strongest lots individually this representative of "The Farmer's Advocate" has seen in any one breeder's stables for some time. Five of them are now of serviceable age and all are from dams that are still in the Springfield herd. In most instances these dams are sired by bulls that have been used in the herd in the past including Royalist of Larkin Farm an Erica bull; Balmedia Shah by Proud Elmer; Middlebrook King 4th by Elm Park Ringleader and others. The latter bull, it will be remembered, won championship honors for Mr. Quarrie at Toronto in 1910. Added to the females got by these bulls are several of the old foundation cows which have been retained for the reason that they have been exceptional breeders. It may be said that the entire herd, in fact, traces to these older cows which include three tribes only. They are the Prides, the Adnies and the Kyamas, three of the best families of the Angus breed. It will also be noted by Mr. Quarrie's advertising copy now running that he is offering upwards of a dozen one and two-year bred-heifers. These are mostly all got by Royalist of Larkin Farms and all safely bred to the herd sire. A number are now showing well forward in calf and with the bulls advertised make up one of the strongest offerings ever listed at Springfield Farms.

Harnelbel Shorthorns.

In directing attention to the advertisement appearing elsewhere in these columns under the heading of Harnelbel Shorthorns we wish to say that no herd is more worthy of favorable mention. By this we do not wish to imply that the herd as yet surpasses or excels in any way the many larger Ontario herds, but during the past five years we know of no herd that has shown, in so short a time, greater advancement. In building up the herd Mr. McGee has at all times used the best of judgment in making his selections or else was unusually fortunate when making all his purchases. From the line up of big, deep, smooth breeding cows seen in the stables at the farm some time ago we would say that, in most cases, he chose wisely, at any rate. As individuals they compare favorably with many of the older herds of the province and a study of the pedigrees reveals much that is fashionable, among present day families. The more noticeable of these include Misses, Butterflies, Waterloo Princesses, Lavenders, Clippers, Jealousys, Nonpareils, Mysies, Crimson Flowers, etc. To use on these Mr. McGee is particularly fortunate in having the great young sire Gainford Supreme 115283, a son of the noted sire and champion, Gainford Marquis (imp.). The dam of Gainford Supreme, Jealousy 4th, is also a show cow, got by Newton Ringleader and also one of the breeding matrons in the herd. With the exception of Jealousy 4th all the cows are calving to the service of this sire and a number of the younger bulls now catalogued for sale are also got by him and each will be found to be worthy gets of a great young sire. Added to these are several good young bulls ranging in ages from 12 to 16 months and all are from cows now in the breeding herd and by the various bulls to which these cows were bred when they came into the herd. We understand they are offered at prices that should clear them quickly in order to make room for the "Gainford" calves now coming on. Address all correspondence to Harry McGee, 61 Forest Hill Rd., Toronto, Ont., and mention the Advocate.

Gossip.
Ramsden Sold.
 A change in advertise-
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 Nonpareil Ramsden
 been used for five years
 d with marked success.
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 This is an extra good
 should do well for his

Herd at Bellwood.
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 "Gainford" calves
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Cultivate triple acreage with Planet Jr. tools

Your country needs all the food you can raise. Increase your production. Raise more than ever, by using Planet Jr. tools. They enable you to cultivate three times the acreage possible with ordinary tools, because you can do the work so easily, quickly and thoroughly.

Planet Jrs. are fully guaranteed and will last a life-time.

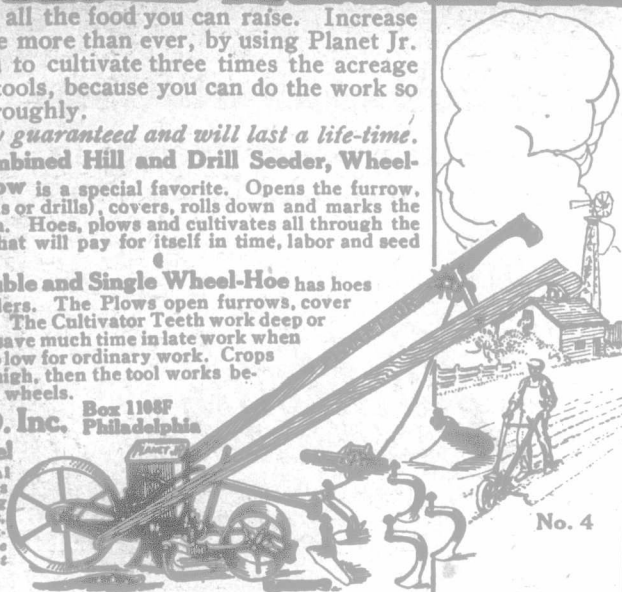
No. 4 Planet Jr. Combined Hill and Drill Seeder, Wheel-Hoe, Cultivator and Plow is a special favorite. Opens the furrow, sows all garden seeds (in hills or drills), covers, rolls down and marks the next row all at one operation. Hoes, plows and cultivates all through the season. A hand machine that will pay for itself in time, labor and seed saved in a single season.

No. 12 Planet Jr. Double and Single Wheel-Hoe has hoes that are wonderful weed killers. The Plows open furrows, cover them and hill growing crops. The Cultivator Teeth work deep or shallow. The Leaf Lifters save much time in late work when plants are large or leaves too low for ordinary work. Crops are straddled till 20 inches high, then the tool works between rows with one or two wheels.

Box 11067 Philadelphia

S. L. ALLEN & CO. Inc.

72-page Catalog, free! Illustrates Planet Jrs. doing actual farm and garden work, and describes over 55 different tools, including Seeders, Wheel-Hoes, Horse-Hoes, Harrows, Orchard, Beet- and Pivot-Wheel Riding Cultivators. Write for it today; also name of nearest agency.



No. 4

Helps Your Horses - Saves You Money

The horse is a vital factor in greater farm production. To realize the best results he must be kept one hundred per cent. fit.

STUFFED COLLAR PADS
 Filled with our Special Composite Stuffing are the only guarantee against bruised, galled and chafed shoulders. They are better than other kinds, being soft, springy and absorbent. They also make possible the continued use of a horse collar long after its worn condition would otherwise compel its discontinuance.

NEW PATENTED HOOK ATTACHMENT
 (Found Only on Pads Made by Us)
 Consists of wire staple with felt washer. It gives hook a firmer hold and prevents pulling off, even though fabric is weakened by long usage. Life of pad is thus materially lengthened. This is the greatest improvement since we invented the hook.

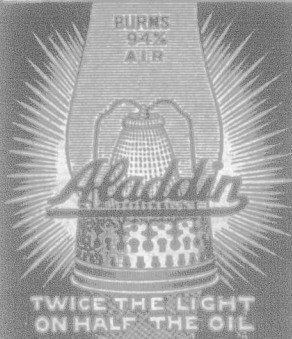
THIRTY-SEVEN YEARS MAKING PADS
 Look for the Felt Washer
SOLD BY DEALERS EVERYWHERE

The American Pad & Textile Company, Chatham, Ontario



Pat. in U.S. Dec. 1, 1910
 Pat. in Can. Apr. 6, 1915

WHITE LIGHT FROM COAL OIL, Gas or Electric



You can now make your home bright and cheerful and SAVE ONE-HALF ON OIL. Tests by Government and leading Universities prove this wonderful new Aladdin is nearly five times as efficient as the best round wick flame lamps. BURNS 70 HOURS ON ONE GALLON common coal oil. No odor, smoke or noise, no pumping up, easy to operate, won't explode. Won GOLD MEDAL. Guaranteed.

TRY IT 10 NIGHTS FREE
 Prove for yourself without risk that this remarkable white light has no equal. If not entirely satisfied, return it at our expense. \$1000 REWARD will be given to anyone who shows us an oil lamp equal in every way to this new Aladdin.

GET YOURS FREE! We want one user in each locality to whom we can refer customers. In that way you may get your own without cost. Write quick for 10 DAY FREE TRIAL OFFER and learn how to get one FREE.

MAKE MONEY SPARE TIME OR FULL TIME! No previous experience necessary. Our trial delivery plan makes it easy. NO MONEY NECESSARY. We start you. Sample sent for 10 days' trial and GIVEN FREE when you become a distributor.

Maxwell

If you have running water in your home, you should have a Maxwell Water-Motor Washer.



Nothing to do but put in the dirty clothes and take them out clean. Think how many other things you can be doing meanwhile! Here is a

"Home" Water-

Attach it to the faucet, turn on water, and the machine washes the clothes—without help—without any attention. Water and suds, that's all—and great piles of dirty clothes will melt away as though by magic, till wash-day becomes the lightest working day in your week.

Motor Washer

that makes special appeal to thrifty housekeepers—no gasoline to buy or current to use—just plain, cheap water! And it will clean the clothes just as carefully as you would do them by hand. Saves work—saves time—saves backache—saves the clothes! Ask your dealer.

MAXWELLS LIMITED Dept. W St. Marys, Ontario 39

The Business of Being a Farmer.

I hasten to say that farming is not a business in the strict sense of the term. It is not, that is, a science of making profits. Manufacturing is a business, merchandising is, but farming is not. For the majority of mankind farming is an occupation simply. From certain points of view it is a speculation, a gamble in futures.

For observe: no one of the factors that make up agriculture are certain or calculable. No one can predict with certainty what seed put in the ground will do, or what the soil will do into which the seed is put, or whether the season upon which so much depends will be wet or dry or warm or cold. The farmer is unable to control the rain, the frost, the wind, the hail, and only to a limited extent is he able to protect his grain or live stock against blight and disease. Further the results of his efforts bear little relation to those efforts. What he gets out of his work is by no means commensurate with what he puts into it. He can not be certain of ten per cent. profit, or one per cent., or any profit at all. And obviously he is the sport and plaything of all the real businesses. He rarely fixes the price of the product he sells or has a say as to the price of the goods he purchases. Every business man can say to the farmer: "This is my price—take it or leave it." The farmer says: "What is your price," or "Make me an offer."

The farmer's business is not on a plane with the merchant's. There is a certain mail order house which does probably the largest merchandising business in the world. It is the boast of this house that to the cost of an article it adds but a single small percentage of profit—but of that profit it is absolutely sure. In that business every element of hazard is covered by some form of insurance. Its whole gigantic machinery runs smoothly and securely to the end of one small profit. There is not a single factor that is not calculable. The business is, in short, a science. But the farmer's business is always a kind of guessing. He guesses at the kind of crop to raise, he guesses at

Sydney Basic Slag

FERTILIZES YOUR LAND ECONOMICALLY AND EFFECTIVELY

If you know the goods place your order with our local agent right away. On the other hand, if you have never used SYDNEY BASIC SLAG, write for our pamphlet giving all information.

Agents wanted where not already represented. Write immediately.

The Cross Fertilizer Co., Limited

Sydney, Nova Scotia

ELEVENTH ANNUAL

Ontario Corn & Grain Exhibition

CHATHAM, ONTARIO Feb. 11 to 14, 1919.

Write to the Secretary for prize list and any information that is desired.

L. L. GREGORY, President
 Chatham, Ontario

P. L. FANCHER, Secretary
 Chatham, Ontario

the character of the season, he guesses at the time to sell his produce. Instead of conducting a real business the farmer finds that his farm simply gives him an opportunity of being busy. Probably every farmer has tried once in his life to keep a set of books in approved book-keeping fashion. He soon ejaculates: "Oh, what's the use." The books tell him nothing. If he has acquired the habit he falls back upon a day-book and a simple record of events and transactions.

Compare the farm with the bank. When I go to the bank for money—which I sometimes get and sometimes don't—I am always amazed at the banker's precaution. He will risk nothing. He demands absolute security—not merely reasonable every-day security, but a safety beyond the shadow of a doubt. In real estate my banker will loan on a margin of safety of sixty per cent.; in live stock he demands a margin of one hundred per cent. His is a business that is founded upon a rock. If farmers took it into their heads—I hardly dare whisper this—to demand security before they put forth effort, the country would immediately revert to the wilderness from which it was reclaimed. Not a seed would be planted, not an animal would be bred, and who would be so foolish as to set a hen?

In the business of manufacturing there are one or two uncertainties. The manufacturer can not be as definite as the merchant in fixing his prices, first because there are always fluctuations in the cost of raw materials and uncertainties whether the workmen he employs will "stay put", and, second, because he can not be always sure in respect to his sales. The manufacturer protects himself, however, in three ways. On the cost side he has two devices, one is the trust or gentleman's agreement or some such device to eliminate competition, settle labor disputes and maintain prices, and one is that grand old doctrine of "protection." Not being quite safe on its own ground Big Business has found it expedient to enter politics, elect subservient officers of state, pass laws of privilege and create tariffs—all under the plea of "protection." On the selling side the manufacturer of goods has created the art of advertising.

THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

**Gombault's
Caustic Balsam**
IT HAS NO EQUAL

For—It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils, Corns and Bunions, CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure every old or chronic ailment and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for
Sore Throat
Chest Cold
Backache
Neuralgia
Sprains
Strains
Lumbago
Diphtheria
Sore Lungs
Rheumatism
and all Stiff Joints

REMOVES THE SORENESS—STRENGTHENS MUSCLES
Cochran, Tex.—"One bottle Caustic Balsam did my rheumatism more good than \$12.50 paid in doctor's bills."
OTTO A. REYER.
Price \$1.75 per bottle. Sold by druggists, or sent by express prepaid. Write for Booklet B. The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

Cream Wanted

Ship yours to us, as we must have it to supply our well-established trade with good quality butter. Therefore, we are prepared to pay you a higher price than any other creamery. We furnish cans and pay express charges. References, any bank.

MUTUAL DAIRY & CREAMERY
743 King St., W., Toronto, Ont.

SAW-BLADES

PRICE OF SAW BLADES F.O.B. FACTORY

20	\$5.00	26"	\$7.75
22	5.75	28"	9.00
24	6.60	30"	10.00

You can order direct from this list, saving both time and money. Simply mention diameter of blade with size of hole wanted, and remit with your order. I ship promptly.

My Catalogue, "The Heart of the Farm," illustrating Lundy Oil Engines, Saw Frames, Grain Grinders, Etc. sent on request.

A. R. LUNDY,
255 KING STREET WEST TORONTO

ARE YOU BUILDING OR REPAIRING?
OUR CATALOGUE OF BUILDING MATERIALS AND TOOLS WILL SAVE YOU MONEY. WRITE FOR FREE COPY.
THE HALLIDAY COMPANY, LIMITED, HAMILTON CANADA
FACTORY DISTRIBUTORS

Farm Equipment

Every up-to-date farm has its clipping machine for horses and dairy cows. Horses work better when relieved of winter coating—cows give cleaner milk when flanks and udders are clipped. Agricultural schools and Government farms use clipping machines. You should have one. Get a Stewart No. 1. If your dealer can't supply you send us his name. Write for 1911 catalog.

Chicago Flexible Shaft Company
Dept. 161, 12th Street and Central Avenue, Chicago

MESSRS. A. J. HICKMAN & CO.

Halse Grange, Brackley, England (late of Egerton, Kent)

Exporters of all breeds of stock, draft horses, beef cattle and show and field sheep are specialties.

You can buy imported stock through us cheaper than in any other way, and we hope to get your enquiry at once, so that we can fit you out before this country is skinned of good stock, as it soon will be now war is over.

Dr. Bell's Veterinary Medical Wonder, 10,000 \$1.00 bottles FREE to horsemen who give the Wonder a trial. Guaranteed for Colic, Inflammation of Lungs, Bowls, Kidneys, Fevers and distempers, etc. Send 25c. for mailing, packing, etc. Agents wanted. Write address plainly.
DR. BELL, V.S., Kingstons, Ontario

Will Exchange

A good sure breeding and sound dapple grey Percheron Stallion for a registered shorthorn cow with calf and heifer calf by side. Address Robey and Mercer, Plain City, Ohio, U.S.A.

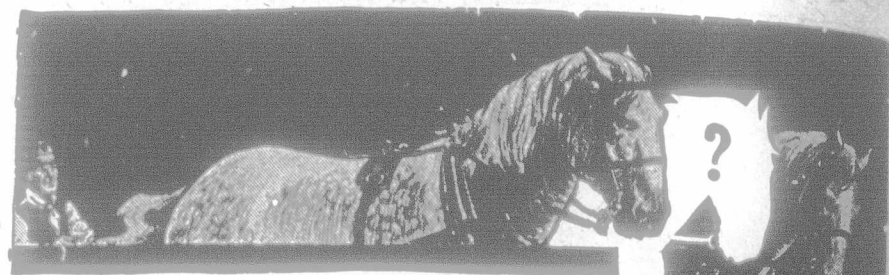
Now advertising is primarily a study in psychology. It is a cunningly wrought appeal to the public mind to purchase something. Its main emphasis is not so much on the object to be sold as upon the person who buys. It understands the art of hypnotic suggestion and by proper manipulation almost anything can be sold to any one—from wooden nutmegs to sewing machines—providing the transaction is done in a hurry. Hence the admonition of advertisements: "Do it now." On the whole the manufacturer is reasonably secure. But the farmers! They are too numerous to combine, too scattered to agree. They are poor politicians and even poorer salesmen. Of all classes in the community the farmer is the least protected.

The farmer's business being what it is there are a few observations to be made concerning it. Farming, let us agree, is an occupation, a method of living. Few enter into it or continue in it from motives of money profit but because it is enjoyed and preferred, because it exercises intelligence and feeling and gives play to moral character, and because it brings one into close contact with that beneficent nature that is the mother of us all. Of all pursuits under the sun agriculture is potentially the most profound. No farmer ever exhausted his farm as a laboratory of forces or ever answered half the questions his fields put to him. The argument in favor of the farm is not that it is particularly profitable but that it offers an interesting life to those who have the capacities to enjoy it.

The contented farmer is always a man of a certain type. A strict business man who would reduce everything to figures would go mad trying to calculate in a place where little is actually calculable. Necessarily the farmer is a man of faith, a hopeful sanguine type. By faith he sows his wheat, by faith he sets his hen. In hope he plants his garden—hoping even against hope that what he plants therein will approximate the beauty and splendor of the picture of the plant upon the packet. I suppose he must love the gamble, the speculation, the very uncertainty of the business. If he guesses wrong he has another guess coming. Regrets do not occupy his mind for long. He knows he is simple and often stupid and not infrequently foolish. But he knows he has hold of something in nature that other men have not. Of all types to which the term "God's fool" is applicable I think the farmer most clearly deserves the title.

Farming being what it is, farmers being what they are, it follows that agriculture, because of its prime necessity, should be the first industry to receive protection from society. Surely none is so simple as to gain the importance of agriculture. The foundation of life is food and the foundation of civilization is the food producer. In the present world crisis the food producer is all important. It is almost worth the cost of the war to have made this discovery. Says our Food Controller in one of his soul-stirring advertisements: "The key to the world's destiny is in the hands of farmers." I rubbed my eyes when I read that. We have never been taught in school or church or state that the farmer held the key to anything, and now suddenly he is seen to hold the key of the world's destiny!

Nevertheless, in spite of its importance, agriculture has been neglected on this Western continent for a period of perhaps fifty years or, to be exact, since the adoption of the doctrine of "protection." The purpose of "protection," as devised by Alexander Hamilton, was to build up industrial cities, progressive centres to offset the stability of the countryside. Well, we have them now—cities big and cities progressive and cities rapacious. Two men in cities to one in the country. This is the day of Big Business. In considerable measure the prosperity of cities has been created out of the wealth of the country. Cities are trade centres. They mean middlemen. Middlemen have seen to it that two dollars out of every three received for country products have gone into their own pockets. Two of every three! And not only have cities gobbled up the bulk of the farmers' movable wealth but they are now acquiring ownership of the land itself. In one country of large agricultural acreage fully fifty per cent. of the farms are occupied by tenants. This means that one half the farming population is working for some man in the city who has filched

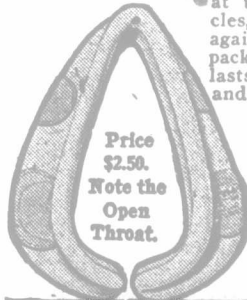


Do You Have Galled Horses in the Stable when Needed in the Field

A heavy leather collar rubbing against tender, sweaty shoulders is very apt to cause galls. Do away with sore shoulders by using Lankford Collars. They not only prevent but actually heal galls while the horse works. More than a million a year now used in place of leather.

Lankford
HUMAN HORSE COLLAR

Made of soft, oily, springy cotton fiber. Does not hold heat. Absorbs sweat and impurities—keeps shoulders dry and cool. The closely woven army duck covering is like a surgical bandage. Open at the throat—moves with shoulder muscles, instead of chafing and rasping against them. Easy to put on. Will not pack or harden. Cannot sweeney. Often lasts three or more seasons. A collar and pad combined.



Price \$2.50. Note the Open Throat.

Every Collar Guaranteed
Every collar is sold upon the guarantee that galled horses get well while working in Lankfords. If your dealer cannot supply you, send us \$2.50 (state size wanted), and we will send you a collar, charges prepaid. (8-2c)
THE POWERS MFG. CO.,
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Pratt's Horses Work Better

when kept in prime condition with the proper kind of diet. A tablespoonful of

Pratt's Animal Regulator

mixed with the feed, sharpens the appetite, improves digestion, keeps the blood cool, bowels regular, coat glossy, health and vigor at top notch all the time. Horses get more nourishment out of their feed. You get more work out of your horses.

Give "Pratt's" to all your horses, cows, hogs and sheep, and watch the results. At your dealer's in pkgs., 25-lb. pails and 100-lb. bags. Money Back If Not Satisfied.

Write for 64-page book on Horses, Cows and Hogs. It's FREE.

Pratt Food Co. of Canada, Limited,
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STILL TO THE FORE

Imported and home-bred stallions and mares of the highest quality and individuality. Our record at the leading shows of America surpass all competitors, and we are offering for sale males and females of all ages, and should be pleased to hear from prospective buyers of quality Clydesdales at any time.

For prices and full particulars, write:

GRAHAM BROS., (Cairnbrogie,) Claremont, Ont.
Long-distance phone. Station, C. P. R.

Clydesdales and Percherons

I have 15 Clyde Stallions, 10 Percheron Stallions and 10 Clydesdales Fillies. The best collection I have ever had at any one time of prize winners and champions, all for sale at prices second to none. A visit to my stables will convince you.

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ABERDEEN ANGUS and JERSEY CATTLE
SHROPSHIRE and SOUTHDOWN SHEEP

Correspondence and Inspection Invited
(Please mention "Farmer's Advocate")

Sunnyside Herefords

We have a choice offering in young bulls, some fit for service, also a few females. For fuller particulars and prices write or come and see
Mrs. M. H. O'Neil & Sons
 Denfield, P.O. - R.R. No. 4, Ontario
 Phone connections, Ilderton



Sunnyside Herefords

Young cows; heifers due, or calves at foot; heifer calves; 1st prize bull calves, Toronto, London and Guelph, 1918. A few yearling bulls. Collie pups, cattle dogs, parents, heifers and sharp dogs \$5; females \$3.
Arthur F. O'Neil - Denfield, Ont., R. No. 2

One Hereford Bull ten months old for sale. This bull is bred of good stock, and will be sold cheap.
 Apply to
WM. BURNETT, R.R. No. 3, Priceville, Ont.

Tower Farm Herefords—Special offering—Ewes, different ages, bred to our champion ram.
E. BARBOUR & SONS
 Hillsburg, Ont.
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SUNNY ACRES Aberdeen-Angus

The present string of young bulls for sale includes some classy herd bull prospects, winners themselves and sired by champions. If interested in Angus, write your wants. Visitors welcome.
G. G. CHANNON, P.O. and Phone, Oakwood, Ont.
 Railway connections, Lindsay, C.P.R. and G.T.R.

Springfield Farm Angus

I have six bulls from 8 to 15 months. All sired by Middlebrook Prince 5th, a son of Jock of Glencairn. Four of these are show calves. Also have other calves younger and could spare a few heifers safely bred to same sire.
Kenneth C. Quarrie, Bellwood, Ont.
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Angus—Southdowns—Collies
 SHOW FLOCKS
 Rams and ewes. Heifers in calf to Queen's Edward, 1st prize, Indiana State Fair.
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Aberdeen - Angus

Meadowdale Farm
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The strongest offering we ever had, all are sired by Victor of Glencairn and a number are ready for service. Prices reasonable.
PETER A. THOMSON - Hillsburg, Ont.

Angus Cattle—Our present offering is three good yearling bulls, and could spare enough females to make balance of a carload. Western buyers should call to see them. One of the oldest herds in Canada. **J. W. BURT & SONS, Aberdeen Farm, R.R. 1, Hillsburgh, Ont.** Long-distance phone, Erin Central.

English Dual-Purpose Shorthorns

Young bulls fit for service and bull calves. A choice and highly bred collection from imported stock on both sides. The right kind to increase the flow of milk, in any herd.
 English Large Black Pigs. A great breed. Approved where tried. Come or write.

Lynnore Stock Farm
 F. WALLACE COCKSHUTT
 Brantford - Ontario

Shorthorns and Clydesdales—We have a number of Shorthorn bulls which are pure Scotch and Scotch-topped; extra good quality, out of high-record cows; also a few females, and one extra good yearling Clyde stallion; also a good two-year-old mare. **P. CHRISTIE & SON, Port Perry, Ont.**

Shorthorn Bulls for Sale—Eight young bulls of serviceable age. Sired by the imp. bull Donside Prince 101809.
WM. GRAINGER & SON, Auburn, Ont.

Evergreen Hill Farm R.O.P. SHORTHORNS
 Offering two bulls 12 months old by St. Clare, R.O.P. No. 5. **S. W. JACKSON, Woodstock, Ont.**

SHORTHORNS
 Present offering, 6 choice young bulls and a few females, their dams are good milkers and best of breeding. Prices moderate.
Stewart M. Graham, Lindsay, Ontario.

out of the farmer's own pockets the money wherewith to buy his farm! Is it any wonder that the country has declined—any wonder that year by year there has been decrease in the production of hogs, the production of sheep, the production of cattle and of grains? To-day the world is facing a food shortage. Is this due to the war? Only in part. The war has only brought to a sudden and early crisis a condition developing rapidly of itself. James Hill, noting the statistics of agricultural decline, predicted that the world would have a "food famine." That was several years before the war. In all probability if the world war had been withheld for twenty years the war could not have occurred, for by that time the world would have been close to its famine.

Surely the time has come for the application of principles of protection to the farms. In view of the war some things must be done quickly. Non-producers must participate in the actual work of production or themselves go unfed. Then for a much longer period than the duration of the war farming must be treated in the manner of an "infant industry"—a term carried over, of course, from the science of "protection."

I will not consider now what measures I think should be adopted in order to give agriculture its due place in the social organization. It should be said, however, that there must be a change not only in methods or policies but in attitude. In order to degrade the farmer and subdue him to his uses the city middleman has resorted to ridicule. We have all seen our picture drawn in the city papers—old clothes, long hair, unkempt beards, clouded feet, a face with vacant expression. What ideas of the "nobility of labor" do you propose to attach to such a figure? Do you think the key to any world's destiny is held in the hands of such a caricature? Why is it that the farmer is the only one of the working class treated with this disrespect? Contrast this attitude with that of Thomas Carlyle long ago where he says: "Venerable to me is the hard hand, crooked, coarse; wherein lies, notwithstanding, a cunning virtue, indefeasibly royal, as of the sceptre of this planet. Venerable too is the rugged face, all weather tanned, with its rude intelligence; for it is the face of a man living man-like. O! but the more venerable for thy rudeness, and even because we must pity as well as love thee! For us was thy back so bent, for us were thy straight limbs and fingers so deformed; thou wert our conscript, on whom the lot fell, and fighting our battles wert so marred."

Similarly a change of attitude must appear in legislative measures. To illustrate, take the question of rural credit. One of the main reasons why agriculture has suffered decline is because farmers have not had access to the world's capital. Money has been supplied in abundance to men speculating in food products and with such money many a speculator has cornered a market. Such money is then reinvested in the upbuilding of cities. It is a doctrine of rural economists that the country must be refinanced every generation. Unless this is done tenantry is inevitable. The increase in tenantry is exactly what we should expect if the country be handicapped. In the United States tenantry has increased in ten years from thirty-five to around fifty per cent. Rural credit schemes of the present day recognize conditions but they are cumbersome, expect too much from the farmer, exact too harsh a security. There are some things society must do even without security—security, that is, of the kind to which it is accustomed, security in property. The state might make loans on the basis of character as many a private banker does. It is not the man with property that needs the help of society but the man without property. The farmer is an honest man. If he were not honest he would not be a farmer. The farmer deals primarily with nature and you can't cheat nature. I recall a saying of Luther Burbank: "You can not deceive Nature or thwart her or be dishonest with her in any particular without the consequences coming back on your own head." With this elementary moral lesson driven into the farmer's conscience can you doubt he will pay his lawful debts if it be humanly possible? In the long run the farmer is solvent because he has on his side our Mother Nature, abounding in good will and active in his favor nine years in ten. The Jewish Agricultural Society has

Sweetening the Soil

WHY does land become sour?

Sourness is due to the presence of an excess of acid in the soil.

These come from the acid phosphates and fertilizers that have been spread on the soil. Also from decaying of old vegetable and animal matter, and water-logging.

How does the sourness affect the crops?

Few crops will grow well in sour or acid land, therefore the crops yielded are very low.

How can you ordinarily judge whether land is sour or not?

Common sorrel, moss, and such plants as the dewberry, flourishes on sour lands, therefore their presence indicates a need of a sweetening agent.

How can you cure this sourness?

By applying a liberal dressing of

ELORA AGRICULTURAL LIME

This is guaranteed to freshen your soil, especially clay soil. It will make it work up well and increase your harvest as high as 85 to 100 per cent.

We have proved this by experiment on our own farm at Caledonia.

Further: If you are in doubt about the condition of your soil, consult us, and we will analyze it for you.

Write for our comprehensive booklet. Correspondence is invited.

The Alabastine Company, Limited
 PARIS ONTARIO

For Quick Growth and Early Maturity, Feed

GARDINER'S CALF MEAL

- It replaces perfectly the cream in skim milk, and provides the nourishment necessary for quick, vigorous growth. It is rich in protein, and several points higher in fat than any other meal on the market.
- Feed Gardiner's Calf Meal first with skim milk, then with milk-and-water, and finally with water only, and your breeding calves will mature earlier and your young steers will be ready for market sooner. It is equally good for colts, lambs and little pigs.
- Put up in 25, 50 and 100-lb. bags. If your dealer doesn't handle it, write us for prices, and for information about Gardiner's other products—Ovatum, Pig Meal, Bacon-fat and Cotton Seed Meal.

GARDINER BROS., Feed Specialists, SARNIA, Ont. 15

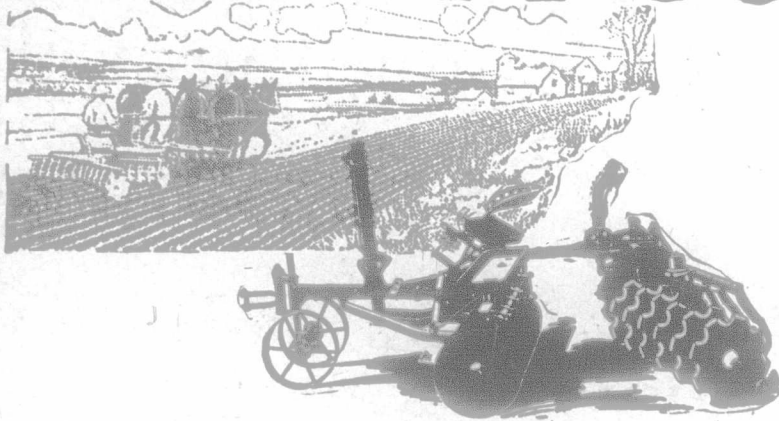
The essential characteristic of Shorthorns is beef, but a beef breed that can show a herd with more than 40 cows with milk records ranging from 10,000 to 13,232 lbs. is worthy of careful consideration.—D. O. Cowan.
 DOMINION SHORTHORN BREEDERS' ASS'N

Write the Secretary for free publications.
 G. E. DAY, Sec.
 Box 263
 Guelph, Ont.
 W. A. DRYDEN,
 Pres. Brooklin, Ont. 13

SHORTHORN CATTLE

I HAVE FOUR RED BULLS
 Two imported, also a few females for sale.
 J. T. GIBSON DENFIELD, ONT.

Burnfoot Stock Farm - Dual-Purpose Shorthorns
 We can now spare two cows. One with a record of 8,700 lbs. of milk, due to freshen in Feb. and one with record of 7,500 lb. as a three-year-old due in April. Also three bulls fit for service. Come and see the herd or if inconvenient your inquiries are solicited.
S. A. MOORE, Caledonia, Ont.
 When writing advertisers will you kindly mention The Farmer's Advocate.



To Make Crops Grow

FOR the kind of seed beds that produce bumper crops, especially where there is danger of drought, the **Deering Disk Harrow**, properly used, is a necessary implement. A Deering disk, used before plowing, pulverizes the top soil. The plow turns this to the bottom of the seed bed, making the seed bed firm and compact throughout, filling up the air spaces usually left by plowing, conserving moisture, and giving the growing crop just that much better chance to fill out and mature.

The Deering disk should be used for two reasons. It does satisfactory work from the start, and it lasts so long that it is an inexpensive harrow to buy. The Deering comes in three widths, 6, 7 and 8 feet, all with 16-inch disks, strong angle steel main frames, and bowed set-lever bars that keep the gangs level in all kinds of disking.

The dealer who sells Deering disks also sells International peg and spring-tooth harrows, No. 2 cultivators for keeping fallow land free from weeds, and International land rollers. See him, or write for complete information.

International Harvester Company of Canada, Limited

BRANCH HOUSES

WEST—Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Lethbridge, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.
EAST—Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N. B.

loaned millions of dollars to a class of farmers almost without capacity for farming and the losses of this society over many years are actually negligible. Besides this aspect of the question there is another, namely that the farmer's assets are not always visible. In every business there is a fringe of assets, invisible but none the less real, commonly classed under the head of "good will" and the like. In farming there is a larger circle of such assets than in most businesses. Good tilth is one, a right system of breeding is another. Upon his own character and the quality of his intelligence and work a farmer may properly lay claim to the consideration of society.

O. L. TRIGGS.

Winter Work For the Beekeeper.

Now that the most active part of the year is over and the bees are safely packed away in their winter quarters, the beekeeper should turn his attention to the preparation for next year's activities. As the honey gathering season is comparatively short and things move very rapidly during that time, success depends mainly upon having everything in readiness before it is actually needed. Much of this work can be done during the winter months.

One of the most valuable assets of the beekeeper is a good supply of empty combs at the commencement of the season and great care should be taken to preserve them during the winter months from the ravages of mice and wax moth. A good method is to place the combs in supers and to tier the supers up one above another with a sheet of paper between each and a hive cover on top of the tier, this will prevent the mice from getting at them. The combs should be stored in a dry cold place. Exposure to zero weather will destroy the larvae of the wax moth. Fumigation with carbon bisulphide will also destroy them but care must be exercised in handling this material as it is highly inflammable.

All supplies should be thoroughly gone over and put into working shape. If any new supplies are required, order them as early as possible and get them made up

Choice Shorthorn Females

Mysies, Rosemary's, Clementinas, Missie, Miss Ramsdens, Cruickshank, Fragrance, etc., all good pedigrees and all good breeding cattle in calf to young bulls. Prices right. Also a few bull calves. Correspondence solicited.

JAS. K. CAMPBELL & SONS, PALMERSTON, ONT.

The Quality Sort WE BREED WHAT WE SELL

Extra choice heifers, best Scotch breeding, 2 senior and 3 junior calves, 1 choice 12 months bull calf. They'll fill the bill.

MEADOW LAWN FARM.

F. W. EWING, R.R. No. 1, ELORA, ONT.

1861 IRVINEDALE SHORTHORNS 1919

Herd headed by Marquis Supreme =116022=; have on hand a number of good young cows and heifers, bred to Marquis Supreme. Also a right good lot of bulls, all by Gainford Select =90772=. Anyone in need of a good young bull or a nice, well-bred heifer, will do well to write to

JOHN WATT & SON

(G. T. R. & C. P. R.)

R.R. 3, Elora, Ontario

SPRUCE GLEN FARM SHORTHORNS

We have for sale a number of young bulls fit for service and a few choice heifers.

JAMES McPHERSON & SONS

DUNDALK, ONTARIO

Shorthorns Landed Home—My last importation of 60 head landed at my farm on June the 20th, and includes representatives of the most popular families of the breed. There are 12 yearling bulls, 7 cows with calves at foot, 24 heifers in calf, of such noted strains as Princess Royal, Golden Drop, Broadhooks, Augusta, Miss Ramsden, Whimble, etc. Make your selection early.

GEORGE ISAAC. (All railroads, Bell 'phone.) Cobourg, Ont.

Pure Scotch and Scotch Topped Shorthorns

We have several choice young bulls of the best of breeding and ready for service. Two are by Raphael (imp.), one by Right Sort (imp.), one by Sittyton Selection, and several by our present herd sire, Newton Cedric (imp.). Prices write.

R. M. MITCHELL, Freeman, Ont., R. R. No.

Shorthorns

Herd headed by Pride of Escana, a great son of Right Sort. Several bulls and a few females with calves at foot for sale. Herd of over seventy head

A. G. FARROW

(between Toronto and Hamilton)

OAKVILLE, ONT.

GLENGOW SHORTHORNS

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding and are thick, mellow fellows, bred in the purple.

WM. SMITH, COLUMBUS, ONT.

Myrtle, C.P.R.; Brooklin, G.T.R.; Oshawa, C.N.R.

Two Dual-Purpose Shorthorn Bulls

red and roan for sale. From dams that are making good record in official test. Grand dam, of roan, second in her class in R.O.P. 1917. These bulls are sired by a bull whose dam made high record, and grand dam held championship for three years. Write for further information.

D. Z. GIBSON, CALEDONIA, ONT.

Shorthorn Bulls and Females—Herd headed by Ruby Marquis, a son of the great Gainford Marquis (imp.). Our calves now coming are all by this sire. We are also offering a few females in calf to him. Get our prices before buying elsewhere.

PRITCHARD BROS., R.R. No. 1, Elora, Ont.

Beechwood Shorthorns

Herd sire, Browndale Victor "117469." Four young bulls for sale: 1 choice bull, 14 months old, weight 1,300; 2 splendid bulls, 12 months old; 1 nice, mellow roan calf, 9 months; also two Scotch heifers with calves at foot.

Long-distance 929 Erie 'phone.

J. WATSON ROULSTON, R.R. 5, Hagersville, Ont.

Spring Valley Shorthorns—We will sell or exchange for females, Nonpareil Ramsden =83422=, we have used him five years. He is an extra good sire. We also have for sale Village Ramsden =122762=, winner of 2nd at London and 3rd at Winter Fair. Will price a few females.

(Phone and Telegraph via Ayr)

KYLE BROS., DRUMBO

Annual Sale of Pure-bred Cattle

(BEEF BREEDS)

The annual sale of pure-bred cattle (beef breeds) under the auspices of the Ontario Department of Agriculture and management of the Guelph Fat Stock Club, will be held in the

WINTER FAIR BUILDING, GUELPH, ONT.

Wednesday, March 5th, 1919

There will be offered about 50 head (males and females)

For further particulars, apply to

C. L. NELLES
President

J. M. DUFF, Secretary
Guelph

HARNELBEL SHORTHORNS

Some Choice Young Bulls For Sale

No. 1—Dark Roan, Calved Dec. 8th, 1917, Sire Sultan, choice Dam, Jealousy 4th.
No. 2—Red, calved May 23rd, 1918, Sire Meadow Lawn Prince Dam, Lady Castremont.
No. 3—Dark Roan, Calved July 15th, 1918, Sire Sittyton Sultan Dam, Elendale Lily.
No. 4—Light Roan, Calved July 25th, 1917, Sire Mortimer Dam, Darlington Queen.
No. 5—Red and White, Calved Sept. 19th, 1918, Sire Gainford Sultan Dam, Crimson Fuchsia 3rd.
No. 6—Red, Calved Dec. 13th, 1917, Sire Mortimer Dam, Lady Sovereign 4th.
No. 7—White, Calved Aug. 1st, 1918, Sire Gainford Supreme Dam, Glen Buell Clipper 8th.
No. 8—White, Calved Aug. 2nd, 1918, Sire Gainford Supreme Dam, Darlington Queen.

HARRY McGEE, Proprietor, 61 Forest Hill Road, Toronto

SAML. TRUESDALE, Manager, Islington, Ont.

The Salem Herd of Scotch Shorthorns

HERD HEADED BY GAINFORD MARQUIS, CANADA'S PREMIER SIRE

Write us about the get of Gainford Marquis. They have won more at Toronto and other large exhibitions than those of any other sire. We still have a few sons to offer, as well as females bred to Canada's greatest sire.

J. A. WATT

Elora, Ontario

before spring. By sending early orders, you not only benefit yourself but you are aiding the manufacturer to fill all orders in time. It is not advisable to put foundation in the frames till spring as it becomes very brittle in the cold weather and there is danger of breaking it in handling. If you have any old broken combs, cappings, etc. now is a good time to get them rendered, using a wax press for this purpose and to have the resulting wax made into foundation.

Protect your bees from mice by having the entrances to the winter cases reduced too small or by covering with a screen too small for mice to get through, but large enough to allow the bees to pass through freely. The entrances of the hives in the cellar can also be closed by this screening. The temperature of the cellar should be kept at about 45 degrees F. The cellar should be dark, and well insulated against changes in temperature.

If the bees were placed in winter quarters rather light in stores, it may become necessary to feed them before bringing them out in spring. For this purpose, candy made as follows is recommended;—Stir 6 pounds white granulated sugar into one and one-eighth pints of boiling water. When the sugar is thoroughly dissolved, add ¼ teaspoonful tartaric acid and boil at a temperature of 240 degrees F. over a hot fire for 3 to 4 minutes without stirring. Allow the mixture to cool to 130 degrees F. and then stir till it begins to whiten. Then pour quickly into moulds, making cakes about one inch in thickness. When cool, these cakes can be placed on the top of the frames above the cluster.

Experimental Farms Note.

A police court isn't all grim and sordid. Sometimes something really funny happens. Not so very long ago a chauffeur was brought in after having run down a man.

"Did you know that if you struck this pedestrian he would be seriously injured?" asked the magistrate.

"Yes, sir," replied the chauffeur.

"Then why didn't you zigzag your car and miss him?"

"He was zigzagging himself and out-guessed me, your honor," was the answer.

Scratches and Stocking

Are prevalent in cold weather irregular work and overfeed induces both. A system tonic and blood purifier, such as

FLEMING'S TONIC HEAVE REMEDY

will prevent these troubles and when developed, with Fleming's Veterinary Healing Oil will quickly cure them. For box, \$1.

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FLEMING BROS., Chemists
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Breeders of

**Milking Shorthorn Cattle,
Belgian Draft Horses
Berkshire Swine.**

We offer animals that will raise herds to a level of war-time efficiency. Bull calves from \$125 up.

DALTON
Massachusetts

MAPLE SHADE

Shorthorns

Young bulls sired by "Archer's Hope." Ten imported bulls. Best Scotch breeding.

WILL. A. DRYDEN

BROOKLIN - ONTARIO

Dual-Purpose Shorthorns

Plaster Hill Herd offer

Two bulls 10 and 20 months; one whose dam gave 11836 lbs of milk in eleven months. These are good individuals. Could spare a few females. Herd headed by Green Leaf Record = 96115 = and Dictator whose two nearest dams average over 12000 lbs in R.O.P. test. Long distance telephone connection.

Ross Martindale - R.R. 3, Caledonia, Ont

SPRUCEDALE

Shorthorns and Berkshires

Herd headed by Sprucedale Butterfly, whose dam, Orma of Northlynd 105359 (owned in herd), has a 4-year-old R.O.P. record of 10463 lbs. milk, 390 lbs. fat. Shorthorns and Berkshires of different ages and sex for sale. Inspection invited.

Frank Teasdale - Concord, Ont.

Mardella Shorthorns

Herd headed by The Duke, the great, massive 4-year-old sire, whose dam has 13,599 lbs. of milk and 474 lbs. of butter-fat in the R. O. P. test. I have at present two exceptionally good, young bulls ready for service, and others younger, as well as females all ages. Some are full of Scotch breeding, and all are priced to sell. Write or call.

Thos. Graham, R. R. No. 3, Port Perry, Ont.

Creekside Shorthorns

Herd headed by Gainford Count out of a Stamford cow and by the great Gainford Marquis (imp.). He is a choice, thick, 21 month's youngster and right. Would exchange him for females. Also have 8 other Scotch bulls from 11 to 16 months (reds and roans). Write me for anything in Shorthorns.

GEO. FERGUSON - ELORA, ONTARIO

BULLS BULLS BULLS

I have for sale 4 very high class Shorthorn bulls, 2 yearlings and two years old. These bulls are to be sold immediately, and the price will be right. Don't over look this chance. Barred Rock Cockerels, \$5.00 apiece. S. Dymont, Barrie Ont.

Graham's Dairy Shorthorns

I have a choice offering in cows and heifers in calf. Bulls from the heaviest milking strains. Satisfaction guaranteed.

Charles Graham, Port Perry, Ont.

What Readers are Saying About The Farmer's Advocate.

Never in the history of "The Farmer's Advocate" have the letters received been any stronger in their commendations, and never have readers so generally expressed their gratitude for the service rendered them by this paper. While it is impossible to find space to reproduce all the encouraging testimonials which have been received we are taking this opportunity of publishing a few in order to let readers know what other subscribers are thinking and saying about "The Farmer's Advocate and Home Magazine." Following are a few selected at random from the mails:

We take pleasure in enclosing \$1.50 for our subscription to "The Farmer's Advocate" for 1919. "The Farmer's Advocate" is the best farm paper in America. We have paid nearly double the amount for American papers not nearly as good.

JOHN F. WERDEN & SON.
Prince Edward Co., Ont.

I can't find words to express my opinion of "The Farmer's Advocate," as it has been such a great help to me.

THOS. H. TAYLOR.

Shefford Co., Que.

Your magazine is always welcomed, and we find it not only interesting but profitable in aiding in our agricultural pursuits. It is a thoroughly up-to-date farm journal.

Leeds Co., Ont. W. T. FOWRISS.

You people have the best farm paper, without a doubt, I have ever read.

FRANK FRETWELL.

Grenville Co., Ont.

I enjoy "The Farmer's Advocate" very much. It is a welcomed visitor every week, and the home would be deprived of one of the greatest comforts if it were not published.

Huron Co., Ont. S. A. CARNOCHAN.

Enclosed please find post office order for \$3.00 for renewal of subscription to your valuable farm paper. Without it we would not be for twice the price.

Elgin Co., Ont. JAMES SMALL.

I am very well pleased with your agricultural paper and the magazine section. You do many good things for the farm people.

T. G. BOUCHARD.

Portneuf Co., Que.

We enjoy "The Farmer's Advocate," and find something in it for every one in the house to read and enjoy.

Huron Co., Ont. W. J. ANDREW.

I have taken "The Farmer's Advocate" for a number of years, and find it O.K. for a farm paper. I would not be without it for twice the price.

Elgin Co., Ont. E. M. NETHERCOTT.

Enclosed find \$1.50 for "The Farmer's Advocate" for 1919. The "Advocate" is a splendid all-round paper for the farm family, and young and old enjoy it each week.

Dundas Co., Ont. JED TUTTLE.

Enclosed you will find \$2.00 for subscription to "The Farmer's Advocate." I do not want to miss one issue, as it is my favorite farm paper.

Victoria Co., Ont. THOS. MCKEE.

My family and myself enjoy "The Farmer's Advocate" very much, and I find it a great help in my farming operations.

GEO. W. PAGE.

Stanstead Co., Que.

I like the "Advocate" fine and would not like to do without it. We used to get it on Friday, but now we often do not get it till Saturday, and sometimes not till Monday. One paper we did not get at all and we did miss it so. My subscription expires January 15, but I did not want to wait till the last day as I do not want to miss any more papers.

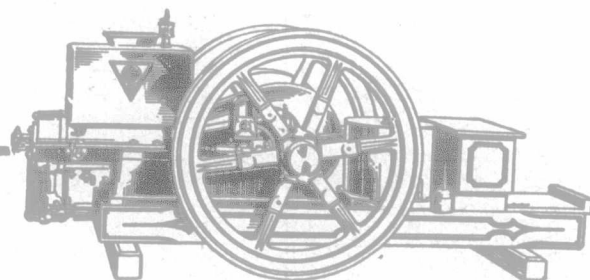
EDWARD TWEDLE.

Wentworth Co., Ont.

The more I read "The Farmer's Advocate" the better I like it, and find it very helpful in many ways.

FRED. W. GIBSON.

Ontario Co., Ont.



ALPHA GAS ENGINES faithful as a work-horse

DEPENDABILITY is the keynote of the Alpha. It RUNS when you want it to—chugs away all day and you never need to think about it.

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Just oil it; turn on the fuel—either gasoline or kerosene—and the Alpha does the rest.

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

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SIRES IN SERVICE:

Imp. Collynie Ringleader (Bred by Wm. Duthie) **Imp. Clipper Prince** (Bred by Geo. Campbell) **Imp. Orange Lord** (Bred by Geo. Anderson)

We are offering a large selection in imported females with calves at foot or in calf. A few home-bred females, 19 imported bulls and 8 home-bred bulls, all of serviceable age. If interested, write us, or come and see the herd.

J. A. & H. M. PETTIT - Freeman, Ontario

Burlington Jct., G.T.R., half mile from farm. Phone Burlington.

MILKING SHORTHORNS

Herd headed by Dominator 106224, whose two nearest dams average over 12,000 pounds of milk in a lactation: cows with records up to 11,000 pounds of milk in a year. Bulls from three to ten months of age, also heifers and cows for sale. Weldwood Farm, Farmer's Advocate, London, Ont.

PEART BROTHERS SHORTHORNS

We are offering our Scotch Bred herd sire Nonpareil Counsel 96631, also ten young bulls of his get practically all ready for service, from cows of both beef type and dual-purpose, one of which has qualified in R.O.P. Prices reasonable. Inspection invited. Pleased to meet trains at Hagersville M. C.R., Caledonia G.T.R. **PEART BROS., Phone 79-16, Caledonia, Ont., R.R. No. 3**

60 Shorthorns 60—Bulls—During next few weeks we will sell bulls of serviceable age at a big sacrifice, to make room. Near a dozen good ones to choose from. Can spare near a carload of fine females, mostly sired by Scotch Grey 72692, a champion and sweepstakes bull.

JOHN ELDER & SON, Hensall, Ont.

SHORTHORNS and CLYDESDALES

Herd still headed by Proud-Victor = 102587 =. For Sale—One red, 20-months old, and eight 10-months-old choice reds and roans. Also females of all ages.

J. B. CALDER - GLANFORD, STA. R. R. 3

Robert Miller, Stouffville, Ont., still has a few Shorthorn bulls, fit for general use, and some females that are as good as sires. Can be found for the man that wants to start right in Scotch Shorthorns. They will be sold for a low price, considering the quality, and the freight will be paid.

Write for anything in Shorthorns. One hour from Toronto.

Walnut Grove Shorthorns—Trout Creek Wonder 56167. Gainford Eclipse 103055. We are offering an exceptionally choice lot of bulls and heifers from the best Scotch families, and our herd sires, Trout Creek Wonder and Gainford Eclipse. If interested, write Twelve miles west of St. Thomas. **DUNCAN BROWN & SONS** Bell. Phone. M.C.R. and P.M.Ry. Sheddin, Ont.

6 BULLS BY ESCANNA FAVORITE

A son of the famous Right Sort (imp.). All are ready for service and priced to sell. We have others younger and could spare a number of young cows calving early to the service of the same sires. Write, don't delay. **Farm at C.P.R. Station. Bell Phone Fergus. Bellwood, Ontario.**

A FEW SCOTCH SHORTHORN BULLS

Several are old enough for service and all are got by a grand son of the great Superb Sultan. Individually they are strong enough to head the best of herds, and the breeding is unequalled. Write us also for any thing in Shorthorns or Clydesdales. **ROBERT DUFF & SON, R.R. Stations C.P.R. - G.T.R., Myrtle, Ont.**

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Cream Means Dollars

IT is like throwing dollars away to waste cream these days. It is worse than waste—it is a crime. Yet good, rich cream is being fed to the pigs owing to inferior separation.

Sweden has perfected the most economical, fastest and greatest labor-saving cream separator ever made. This is the world-famed

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They cut, crush, smooth, pulverize, and mulch, turning the soil twice—all in one operation. That's why the

"Acme" Pulverizing Harrow

makes an ideal seed bed. Light draft—easy on the horses and YOU ride. There's an "Acme" for every purpose—sizes 3 to 17½ feet in width. Send for new free book, "The 'Acme' Way to Crops That Pay." Do it NOW.

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No. 23 5½ ft. wide

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Perfect hearing is now being restored in every condition of deafness or defective hearing from causes such as Catarrhal Deafness, Relaxed or Sunken Drums, Thickened Drums, Roaring and Hissing Sounds, Perforated, Wholly or Partially Destroyed Drums, Discharge from Ears, etc.

Wilson Common-Sense Ear Drums

"Little Wireless Phones for the Ears" require no medicine but effectively replace what is lacking or defective in the natural ear drums. They are simple devices, which the wearer easily fits into the ears where they are invisible. Soft, safe and comfortable.

Write today for our 168 page FREE book on DEAFNESS, giving you full particulars and testimonials.

314 WILSON EAR DRUM CO., Incorporated
Inter-Southern Bldg. LOUISVILLE, KY.

Centre View Farm

OFFERS FOR SALE:

Sir Riverdale Dutchland, born Sept. 5, 1917; sire, Dutchland Creamelle Cornucopia, whose dam is a 30.71-lb. daughter of Colantha Johanna Lad; dam, Riverdale Rose, 588 lbs. milk, 25.13 lbs. butter as a 4-year-old. He is evenly marked, and a very fine individual, will send photo on request.

M. McDOWELL
Woodstock Shipping Station. Oxford Centre P.O.
G. T. R. and C. P. R.

Holstein Bulls

Ready for service and younger. Cows and heifers bred to ORMSBY JANE BURKE, whose two nearest dams average 38.82 lbs. of butter in 7 days. The three nearest sires' dams and his dam's records average 35.69 lbs. for 7 days, and 112 lbs. milk for one day.

R.M. Holtby, R.R. 4, Port Perry, Ont.

Questions and Answers.

Miscellaneous.

Permanent Pasture.

What is the mixture for a permanent pasture?
H. V.

Ans.—For fairly high land there are a number of grasses which give fairly satisfactory results. Orchard grass 4 lbs.; meadow fescue, 4 lbs.; tall oat grass, 3 lbs.; meadow foxtail, 2 lbs.; white clover 2 lbs.; alsike, 2 lbs.; Kentucky blue grass, 4 lbs.; timothy, 2 lbs. will give very good pasture throughout the entire season once they get a start. Some prefer 3 or 4 lbs. of alfalfa and 3 lbs. of red clover to the mixture to furnish feed the first year before some of the finer grasses become established. Alfalfa does not generally stand pasturing, and red clover dies out after the second year.

Cows With Depraved Appetites.

A number of my cows chew wood and bones. They are fed on silage, corn fodder, oat chop and a small quantity of stock food. They milk fairly well but are failing in flesh.
F. E. G.

Ans.—This depraved appetite is an indication that the feed is lacking in mineral matter especially phosphates. The ordinary feeds as a rule supply sufficient mineral matter to meet the requirements of the animal system, especially if the soil contains any quantity of phosphates and lime. Clover hay and oats should supply sufficient mineral matter. A mixture of salt and sifted hard wood ashes has been recommended as a means of satisfying this abnormal appetite.

Cow Fails to Breed.

Two young cows each with first calf. One retained the afterbirth for a time. They come in heat at regular intervals, but are not yet in calf. What is the cause? Is there any cure?
J. G. C.

Ans.—It is rather difficult to state just what the trouble may be. It is possible that something is wrong with the bull. Of course, if he is stopping other cows the cause of trouble will have to be looked for in other quarters. Due to derangement of the genital organs or to disease, some cows are difficult to get in calf. Flush out the cow regularly for a few days with a mild disinfectant. Wash them out before breeding. What is known as the yeast treatment may give the desired results if the heifer is physically all right. Mix an ordinary cake of yeast to a paste with a little warm water and allow to stand for 12 hours in a moderately warm place, then stir in one pint of freshly-boiled luke-warm water, and allow to stand for another eight or ten hours. The mixture will then be ready for use, and the entire quantity should be injected into the vagina of the animal to be bred. Use the mixture when period of heat is first noticed and breed when period is about ended.

Veterinary.

Lame Calf.

Calf had diarrhoea for a week after birth. Then a swelling came on the hind leg. It lies all the time until lifted up. It then staggers around. Has not a good appetite.
A. W.

Ans.—Bathe the swollen part long and often with hot water, and after bathing rub well with hot camphorated oil. Feed on new milk and keep comfortable. A recovery is doubtful.
V.

The kirk in a certain Scottish village was in urgent need of repair, and Sandy McNab, a very popular member, had been invited to collect subscriptions for the purpose. One day the minister met Sandy walking irresolutely along the road. The good man at once guessed the cause. "Man, Sandy," he said, earnestly, "I'm sorry to see ye in this state." "Ah, weel, it's for the good o' the cause," replied the delinquent happily. "Ye see, minister, it's a' through these subscriptions. I've been down the glen collectin' fun's, an' at every hoose they made me hae wee drappie." "Every hoose! But—but—surely, Sandy, there are some of the kirk members who are teetotalers?" "Aye, there are; but I wrote tae those."



SKUNK, COON MINK, WEASEL

Are all bringing good prices. Ship your lot to us and receive highest market figures, returns made same day as shipment is received. Shipping tags furnished free. Write for some and price list.

WM STONE SONS, LIMITED
WOODSTOCK, ONT.

Sunnybrook Farm Holsteins

Offers—One 30-lb. bull, and several grandsons of the great King Segis. Two of these are ready for heavy service. We also have a number of heifers of same breeding—all from approved dams.

JOSEPH KILGOUR
EGLINTON P.O., ONT., NORTH TORONTO
Phone Adol. 396

33-lb. Grandsons of Lula Keys

I have at present ten young bulls all sired by my own herd sire King Korndyke Sadie Keys a son of Lula Keys 36.05 lbs. of butter in 7 days. These youngsters are all first-class individuals and their dams' records run as high as 33.29 lbs. of butter in 7 days. Several of them must go quick to make room.

D. B. TRACY (Hamilton House Farms) COBOURG, ONT.

Highland Lake Farms

For Sale: Two extra good (30-lb.) thirty-pound bulls ready for heavy service. Priced to sell. Also younger ones by a son of May Echo Sylvia.

R. W. E. BURNABY - **JEFFERSON, ONT.**
Farm at Stop 55, Yonge St. Radial

HOSPITAL FOR INSANE

HAMILTON - ONTARIO

Present herd sire is one of the best sons of King Segis Alcartra Spofford; we have three of his sons born during May and June last, and also a grandson of Lakeview Lestrage. Apply to Superintendent.

Raymondale Holstein-Friesians

A herd sire of our breeding will improve your herd. We have sons of our present sire, Pontiac Korndyke of Het Loo (sire of \$12,750 Het Loo Pieterje) and also sons of our former sire, Avondale Pontiac Echo. Several of these are of serviceable age, and all are from good record dams. Quality considered, our prices are lower than anywhere else on the continent. These youngsters should not remain long. Write to-day.

Raymondale Farm, Vaudreuil, Que.
D. RAYMOND, Owner
Queen's Hotel, Montreal

Manor Farm Holstein-Friesians

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Posch and King Korndyke Sadie Keys. All from good record dams. Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter to seven days. Correspondence solicited. Visitors welcome.

GORDON S. GOODERHAM, Clarkson, Ont.
Stations: Clarkson and Oakville. Farm on Toronto and Hamilton Highway.

Young Bulls for Sale

from R.O.P. champions and dams and sisters of R.O.P. champions, King Segis Pontiac Posch and King Korndyke Sadie Keys. All from good record dams. Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter to seven days. Correspondence solicited. Visitors welcome.

WALBURN RIVERS & SONS (Phone 343 L Ingersoll, Independent Line), R.R. 5, Ingersoll, Ont.

ELDERSLIE FARM HOLSTEIN-FRIESIANS

I am offering for immediate sale several young sons of my senior herd sire Judge Hengerveld De Kol 8th, who is a 32.92-lb. grandson of De Kol's 2nd Butter Boy. The dams of these bulls all have R.O.P. records running up as high as 195.26 lbs. of milk for the year. Write for pedigrees.

A. MUIR (Take Kingston Road Radial cars from Toronto, Stop 37) Scarborough P. O., Ont.

CLOVERLEA FARM HOLSTEIN-FRIESIANS

Offers for sale some choice young bulls ready for service from tested dams. Priced right for immediate sale. Phone or write

GRIESBACH BROS. COLLINGWOOD, ONT.

Silver Stream Holsteins

—We are offering a choice lot of young bull calves, all age on hand at present. We also have some richly-bred young cows due to freshen soon to offer. Write us what you want, or better come and see them.

JACOB MOGK & SON, R.R. 1, Tavistock, Ont.

HOLSTEINS

—A few choice cows and heifers, either fresh or due to freshen soon; also three young bulls, including the first-prize senior calf at Guelph, last December.

W. J. BAILEY, Jarvis, Ontario

Sunnyside Stock Farm Holsteins

—Echo Segis Fayne, our herd sire, is by a brother of the world's 50-lb. cow, Segis Fayne Johanna. He is a grand bull in every way, and is not yet 4 years old. To avoid in-breeding would sell him at a price. Also have bulls from 1 month to 17 months old for sale, sired by Echo Segis Fayne and out of grand producing cows.

JOHN M. MONTLE, Prop., Stanstead, Que.

A Few Select Holstein Bulls

—Priced right—These youngsters are exceptionally good individuals; all from good dams and also spare a few heifers bred to our 30-lb. sire, Gipsy Pontiac Cornucopia.

JOS. PEEL, R.R. No. 4, Port Perry, Ontario

Choice Grandson of Queen Butter Baroness

I am offering a choice 14-months bulls from a 21-lb. junior 2-year-old daughter of Louis Prilly Ronble Hartog, and sired by Baron Colantha Fayne, a son of Queen Butter Baroness, the former 33-lb. Canadian champion cow. Also have others younger.

T. W. McQUEEN (Oxford Co.) Tillsonburg, Ont.

Walnut Grove Holsteins

—I am offering a choice lot of bull calves, all sturdy world's champion, May Echo Sylvia. All are from R. O. M. dams and good individuals. Also having the usual offering in Tamworth Swine.

C. R. JAMES (Take Radial Cars from North Toronto) RICHMOND HILL, ONT.

K, COON WEASEL

low prices. Ship your lot at best market figures, re-as shipment is received free. Write for some

SONS, LIMITED

OCK, ONT.

Steins

Two of these are ready from approved dams.

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The Advocate Advts. Pay.

Questions and Answers. Veterinary.

Horse Sweats in Stable.

Clydesdale horse sweats every night in stable. We do not want to clip him. How can we correct the fault?

O. H. L.

Ans.—This is doubtless due to a heavy coat and warm stable. Sponging the skin thoroughly with 1 part nitric acid to 99 parts water is supposed to check it, but we do not recommend the treatment. All that we see that you can do is either put up with it as it is or keep him in a cooler stable. It would not be wise to clip him now.

Miscellaneous.

1. Calf had diarrhoea for a couple of weeks when 3 months old. Soon after recovery one of its ears drooped and it salivated. It is still the same way.

2. What is the best method of destroying ticks on sheep in cold weather?

3. Mare has itchy pimples on her side.

P. J. B.

Ans.—1. It is hard to account for the drooping of the ear. Nothing can be done for it. A spontaneous cure may take place. The salivation is due to some trouble in the mouth. Probably irregularity of the teeth which might be corrected by the use of a rasp.

2. Mix 1 part white hebleore with 5 parts cement. Part the wool and dust the skin with it. Keep dry for a few days after applying.

3. Wash well once daily until itchiness ceases with a warm solution of corrosive sublimate 30 grains to a pint of warm water.

Miscellaneous.

1. Horse has been irregularly lame and the lameness gradually increasing since spring. The foot has become smaller than the other.

2. One of my cows had indigestion from eating musty corn fodder. What can I give with this feed to prevent trouble?

3. Give cure for indigestion in cattle.

A. C.

Ans.—1. The symptoms indicate navicular disease. A cure is very doubtful, but the symptoms can be mitigated by repeated blistering the coronet. Get a blister made of 2 drams each of biniodide of mercury and cantharides mixed with 2 ozs. vaseline. Clip the hair off all around the hoof for two inches high. Tie so that she cannot bite the part. Rub the blister well in. In 24 hours rub well again, and in 24 hours longer apply sweet oil. Turn loose in box stall now and oil every day until the scale comes off. Then tie up and blister again, and after this blister once each month so long as you can give rest.

2. It is very dangerous to feed musty fodder to any class of stock. No treatment will render the feed safe.

3. Purge with 2 lbs. Epsom salt and 2 ozs. ginger and follow up with 2 drams nux vomica 3 times daily for 3 or 4 days.

V.

Lame Mare.

I have a mare that is lame on the road, but on soft ground she is not so bad. She is worse sometimes than others. Is this the result of a splint? What would cause the trouble, and what is the quickest cure?

J. G. H.

Ans.—You do not state whether she is lame in a hind or fore limb, but we presume it is in front. The symptoms, so far as given, indicate foot lameness. If on a careful examination of the foot no tenderness can be located it will indicate coffin joint lameness for which treatment consists in removing the shoes, paring the heels well down and blistering the coronet. Get a blister made of 2 drams each of biniodide of mercury and cantharides mixed with 2 ozs. vaseline. Clip the hair off all around the hoof for 2 inches high. Tie so that she cannot bite the parts. Rub well with the blister. In 24 hours rub well again, and in 24 hours longer apply sweet oil. Turn in a loose box now and oil every day until the scale comes off. Then tie up and blister again, and then blister once monthly so long as you can give her rest. As it is not possible from the symptoms given to make a definite diagnosis, it will probably be wise to have her examined by a veterinarian before adopting treatment.

V.

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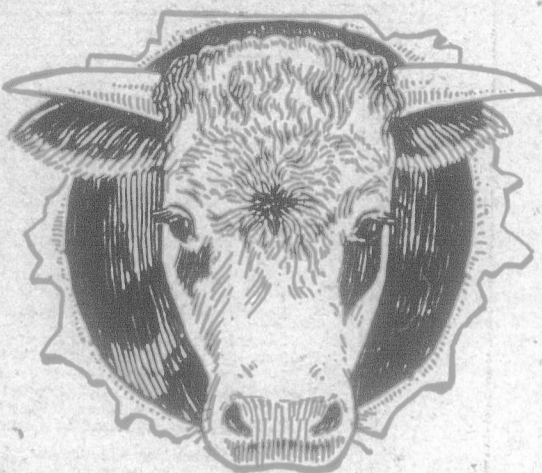
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Questions and Answers. Miscellaneous.

Horse Killed on Railway.

Horses get over disputed boundary fence and get on to public road through open gap of neighbors. They wander on to railroad tracks and one is killed. Can neighbor be held responsible because of open gap? J. G. C.

Ans.—No.

Leaky Teat.

I have a cow with a hole in the side of her teat through which the milk oozes when she is milked. What is a remedy? H. H.

Ans.—It is doubtful if anything can be done to relieve the trouble while the cow is in milk. When she is dry a veterinarian might be able to operate on the teat and close up the opening.

Concrete Watering Trough.

I built a cement watering trough inside a stone wall, in the horse stable, where there has been no frost. The trough is 8 feet long, 2 feet wide and 2 feet 9 inches high, with the wall 4 inches thick. It was mixed in the proportion of one to six. It has stood for five days but does not seem to harden properly. Would the season of the year have any effect on cement hardening? Has enough cement been used? E. H.

Ans.—Cement does not harden in cold weather as well as in hot, dry weather. If the frost is kept out, it is possible that it will harden in time, but frost will be detrimental to freshly mixed cement. One to six should make a strong enough wall, although for a water trough where the wall is only 4 inches thick it might have been better to have made it a little stronger.

Wall for Implement Shed.

I purpose erecting an implement shed. Would advise mixing small stone with gravel and cement. In what proportion would you mix the cement and gravel? Would a foundation 10 inches in the ground, 9 inches above ground and 10 inches thick be satisfactory? The building to be 60 by 24 feet and 10 feet high. J. E.

Ans.—For a 10-inch wall the stones would have to be pretty small, as they should not come within 3 inches of the outside. If small stone are handy they can be used to advantage where the wall is thick enough. As to the depth to put the foundation, it will depend upon the nature of the soil. If it is firm, 10 inches would be deep enough, but if at all soft or boggy it would be necessary to put the foundation down to a firm footing. A concrete wall 10 inches thick should be satisfactory to support the frame of the building mentioned. Mixing in the proportion of one part cement to seven or eight of gravel has proven to be strong enough.

Canker in Poultry.

Have had some trouble with my hens. Several have died and some more of them are affected with some disease which I have been told may be gapes. They do not seem very sick but go around all drawn up and seem to be gasping for breath and their flesh to look as if under the feathers is dark in color, almost purple. Have isolated the affected ones. Could you please tell me what it is? What causes it and the remedy? M. S.

Ans.—I would judge from your correspondent's description that the birds are affected with what is known to the poultrymen as "canker". This is a highly contagious disease and is very difficult to treat owing to the fact that the growth frequently comes in the windpipe or in the mouth and as it enlarges it is apt to smother the bird, consequently the treatment is difficult. You have done right in isolating the birds and the well birds should be given a dose of salts. The following treatment is recommended by Dr. Pearl:

"A good treatment for canker is undiluted creolin applied with a cotton swab. The swab should be held against each sore for a short time. The whole surface of each patch should be treated. Another good treatment is to wash sores with hydrogen peroxide 1 part water 1 part." W. R. and

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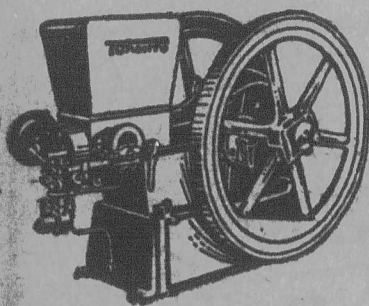
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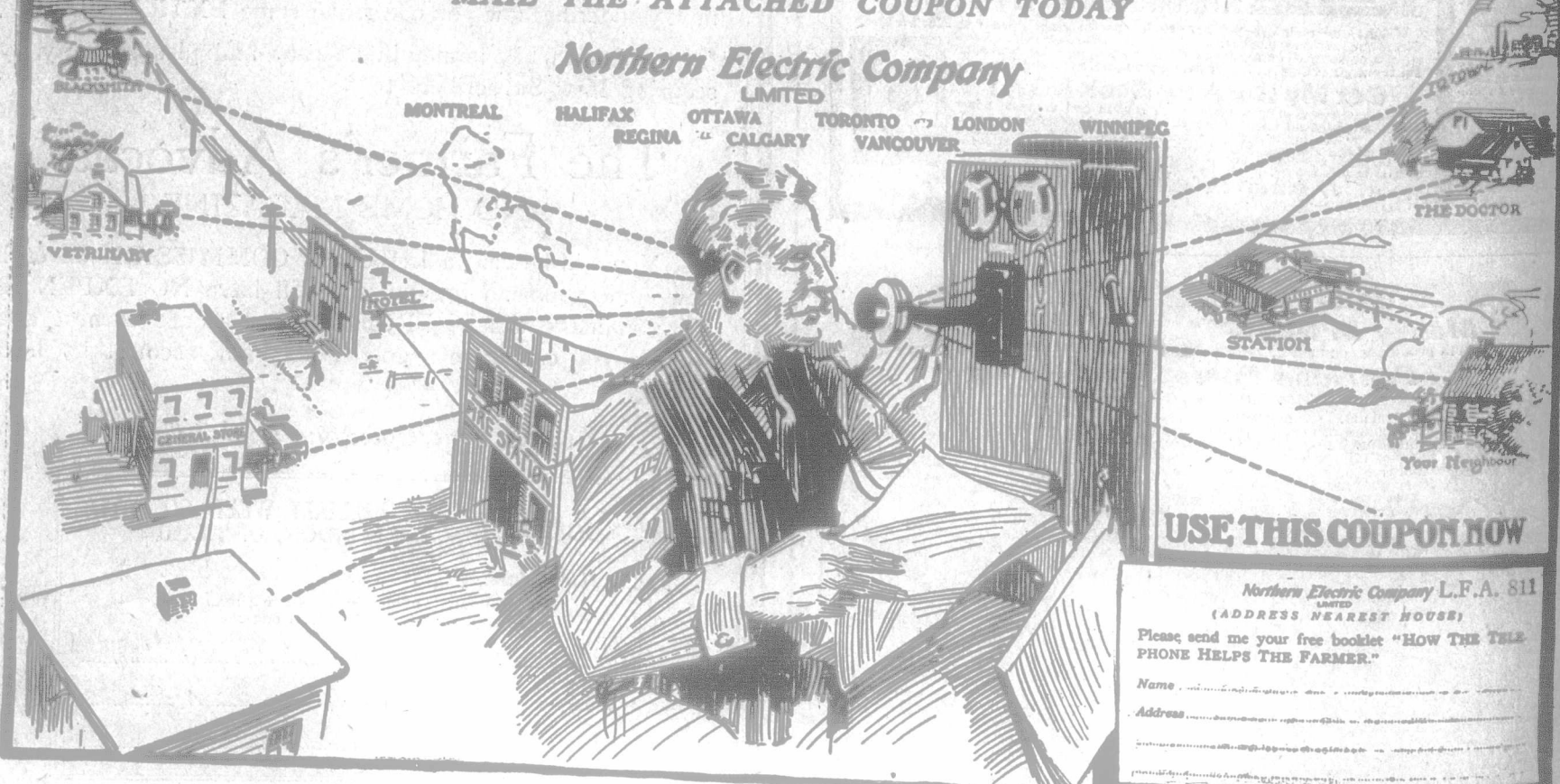
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