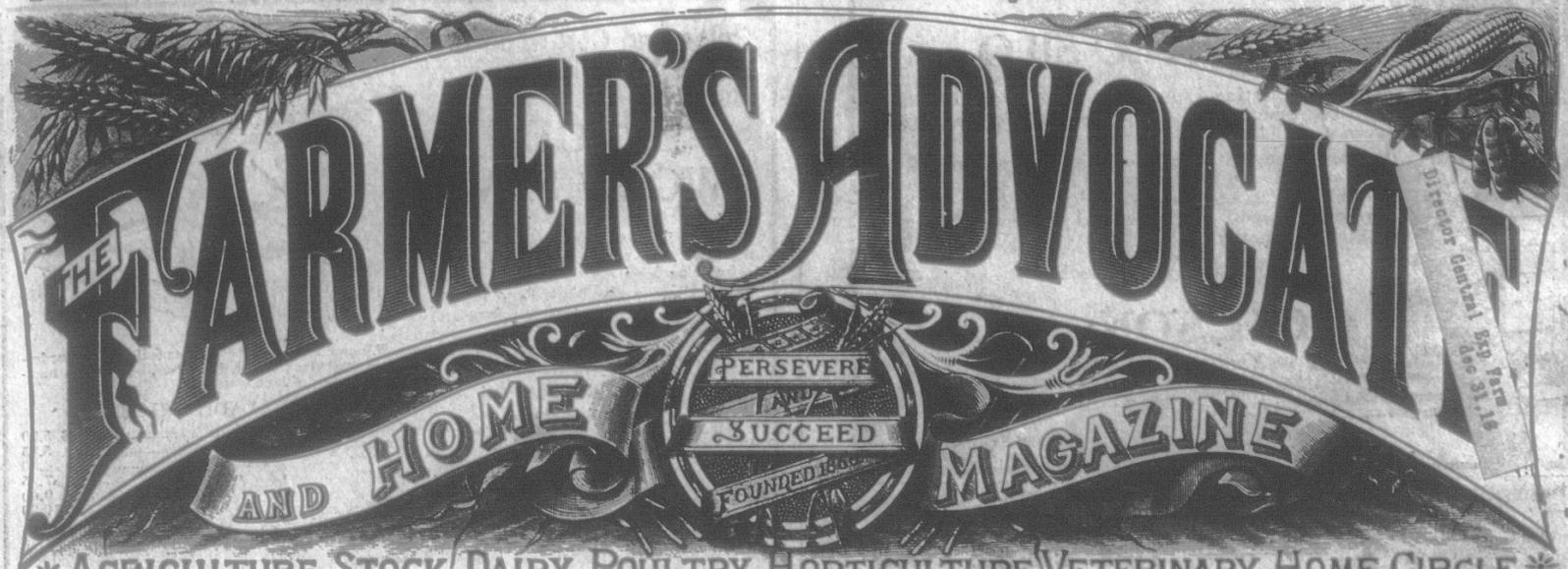


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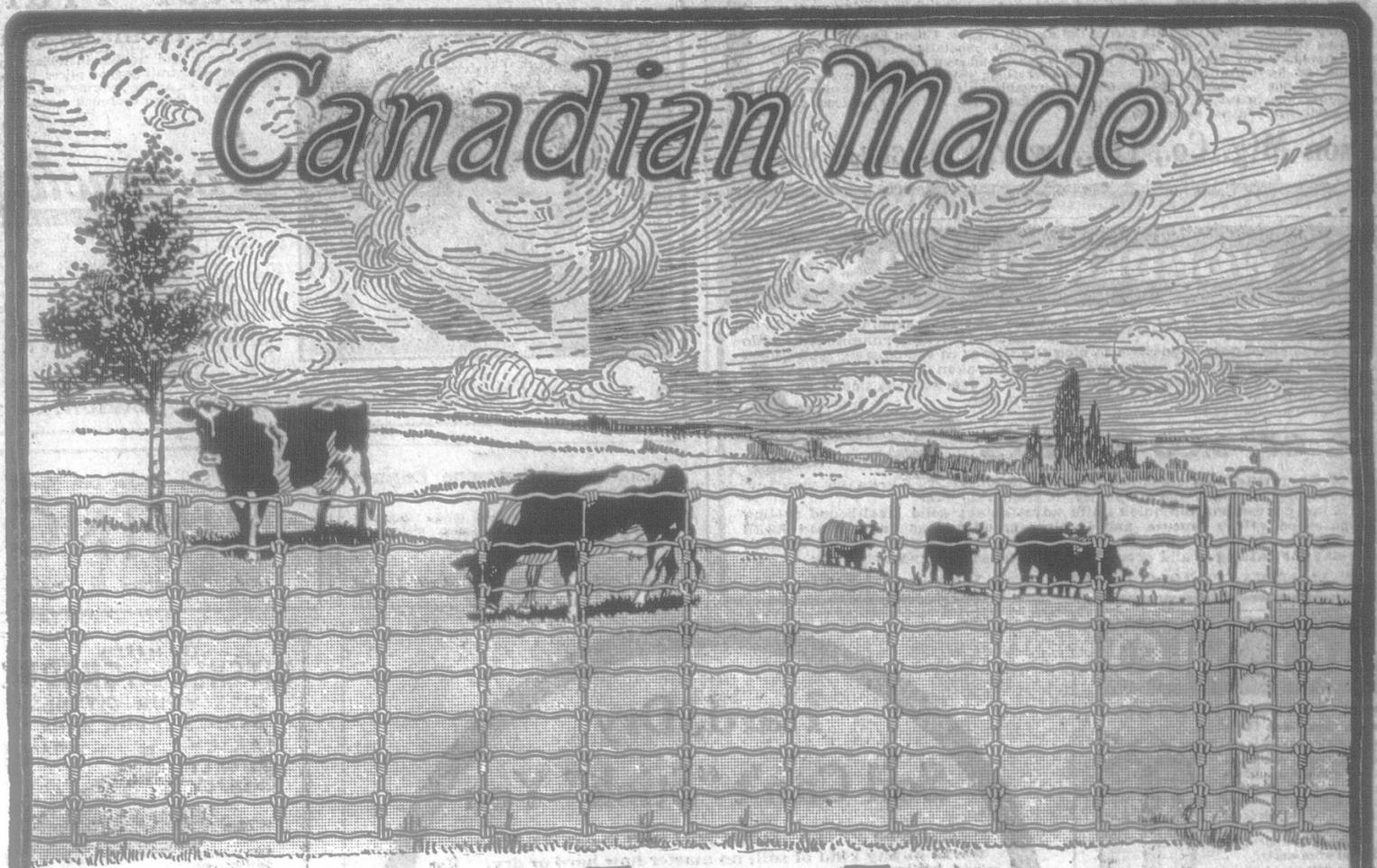
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Vol. LIII.

LONDON, ONTARIO, FEBRUARY 28, 1918.

No. 1327



## Frost Fence First

Here stands a FROST fence—one of the thousands defying the stress of weather and strain of usage on Canadian farms.

In every Province of the wide Dominion you will find FROST fences giving service that makes their owners proud.

FROST fence stands up bravely and triumphantly against all kinds of Canadian weather because all varieties of Canadian climate are taken into consideration when making FROST fence.

Unlike common fence, ordinary commercial wire is not used for FROST fence. We make the wire for FROST fence in our own wire mills. The steel has the right temper and the wires the smooth, careful



galvanizing that is required, to withstand extremes of Canadian temperature, fog, snow, hail and rain.

The laterals have the special FROST wave, that makes the fence exceptionally elastic and enables it to withstand strains that would rip and snap an ordinary fence.

The FROST lock is unlike any other. Look at it. There is nothing cheap or flimsy about it. Plenty of wire, and to spare, is used to wrap it around the stay and lateral so that it cannot work loose.

SERVICEABILITY is put into every inch of FROST fence. It is FIRST in quality as well as FIRST in sales. It is FIRST choice with those who want the longest service and the neatest, strongest fence they can get for their money.

A style for every purpose. If you do not know a nearby dealer, write us direct.

**FROST STEEL AND WIRE COMPANY, LIMITED, Hamilton, Canada**

### The HYLO SILO

THE everlasting silo—yields 100% profit on the investment every season—sweet, fresh ensilage down to the last forkful.

Exclusive patented features of great value—specially selected, imported material of the highest quality, and careful workmanship, explain why the Hilo is the choice of the most progressive and prosperous farmers in each community.

Write for free silo book to-day.



**GILSON MFG. CO. LTD.**  
230 York St. Guelph, Can.

*"Goes Like Sixty"* **This Engine Will Cost You Nothing**



You need an engine—get a Gilson on our new easy payment plan, and it will pay for itself. You have the work for it to do this fall and winter, help is scarce and high-priced—save yourself a lot of worry, and enjoy that "Feeling of Security" which is such a definite part of the staunch, reliable Gilson Engine.

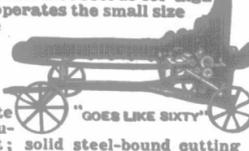
Gilson Engines have long enjoyed an indisputable reputation for dependability, power, simplicity and economy. This year finds us with an even more attractive proposition for the discriminating buyer. Prices of everything you have been buying have been soaring, but by careful management we are able to furnish Gilson Engines at remarkably low prices. Write to-day for catalogue, price, and easy payment plan, stating what size you are interested in.

**Gilson Mfg. Co., Ltd., 259 York St., Guelph, Ont.**

### THE WONDERFUL GILSON

**SIMPLY CAN'T BE CLOGGED.** The simple, scientific, carefully worked-out construction of the light running Gilson Silo Filler makes it absolutely impossible to clog the throat of the blower. The Gilson is the highest running blower cutter made. It has broken all records for high elevation and rapid work with light power. A 4 h.p. operates the small size splendidly. Made in three sizes to suit any power. The Gilson is rightly called the

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**GILSON MANUFACTURING CO. LTD. .509 York St., GUELPH, Ont.**

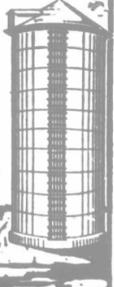
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This New PETER HAMILTON Stiff Tooth Cultivator works in any kind of soil, no matter how hard or dry. For weed killing and growing big crops, you need the help of a

### New PETER HAMILTON Stiff Tooth Cultivator

Surpasses all other implements for Summer-fallow work. Built with extraordinary strength all through, to stand the heaviest work of deep cultivation. Has many special features of improvement, including new relief spring. Write to-day for illustrated circular.

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into stove lengths and shorter with ease by the

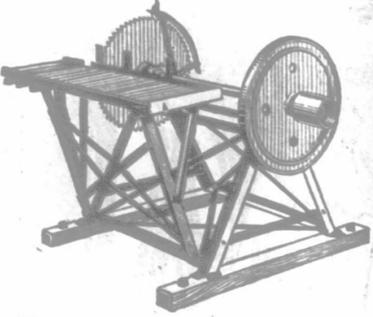
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SHAFT of 4-foot, 4-inch cold-rolled steel. SHAFT-BOXES dust-proof and non-heating.

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24-inch	6.50
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Use a SPRAMOTOR unless we made it.

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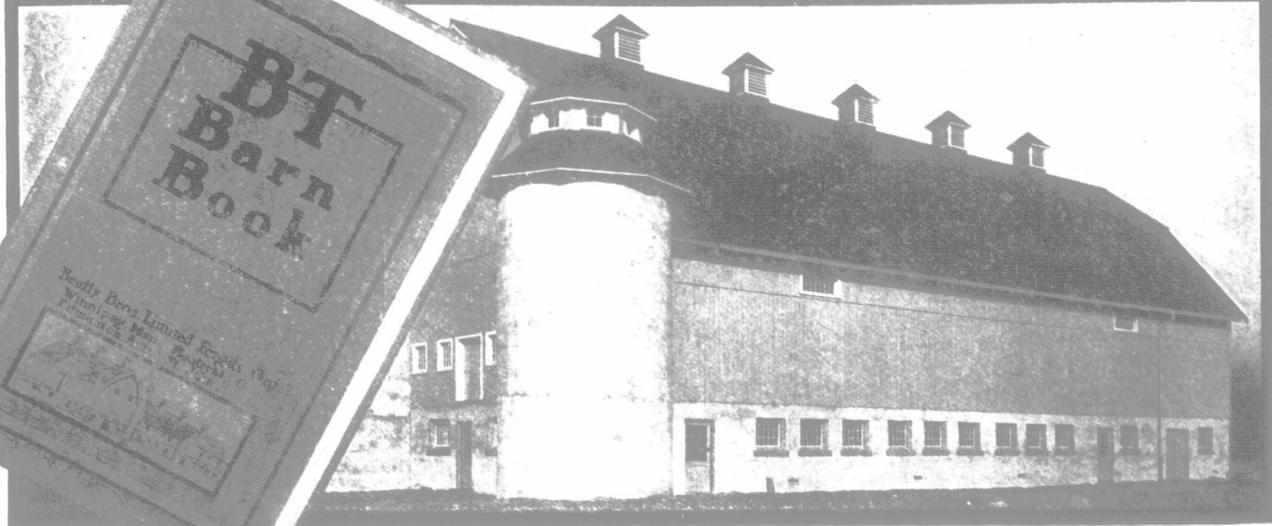
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**T**HIS is the WAR FLOUR of the OGILVIE MILLS—a loyal product to conserve Canada's resources and, at the same time, give the public the best possible flour that can be milled according to the Government standard.

This War Flour is excellent in quality and flavour—but it is slightly darker in color than "ROYAL HOUSEHOLD" to which you have been accustomed.

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In the meantime, the new regulations—being in the best interests of Canada and the British Empire—demand the whole hearted support of the Millers and the Public.

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When all your "ROYAL HOUSEHOLD" is gone, make sure of getting the next best grade by ordering

## OGILVIE'S STANDARD

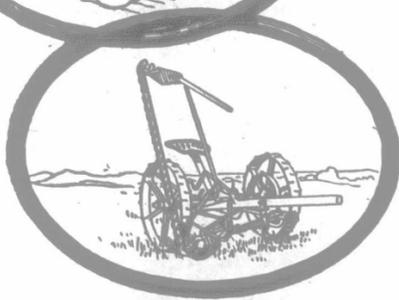
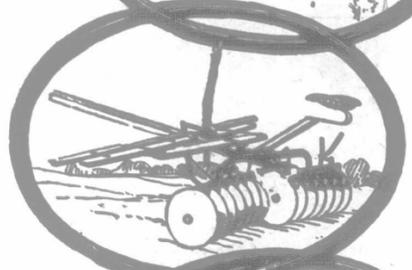
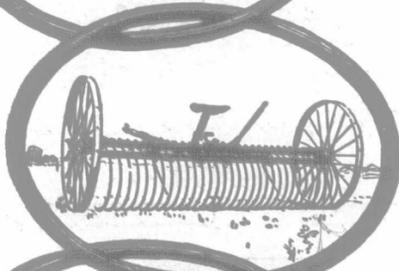
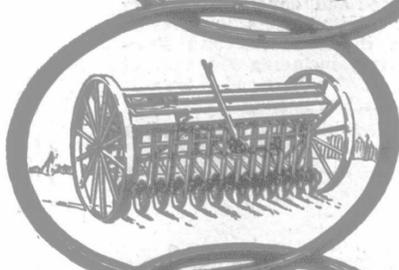
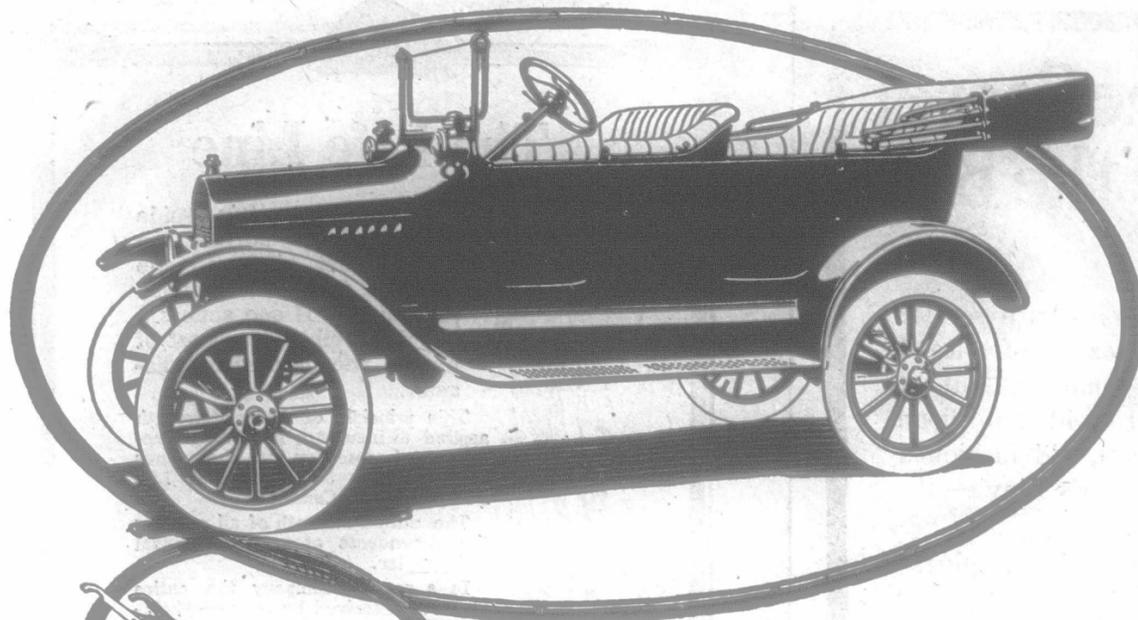
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Daily Capacity, 19,000 Barrels

*The Largest Millers in the British Empire.*



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A farmer with a Ford car can dispense with one or two of his horses and make the trips to town, railway station, creamery, or to the neighbours in one-third the time. In fact there is no farm machine made that will save the busy farmer and his busy wife so much valuable time as a Ford. And it's so easy to take care of—far easier than a horse. No bed to make, or hay and oats to get, no harnessing and unharnessing, and no stables to clean. The Ford practically takes care of itself.

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# Ford

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Touring - - \$495 Coupe - - \$770  
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Ford Motor Company of Canada, Limited  
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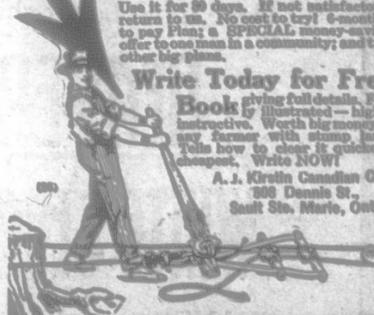
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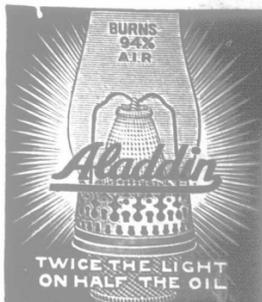
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Some of the higher-priced artificial "roofings" will last 5, 10, or possibly 20 years, if given a frequent coat of paint, and weather permitting; the wooden shingle has been known to last 80 years, and to defy successfully rain, frost, snow, sun and wind all that time.

There is no better shingle made to-day than

# BEAVER BRAND WHITE CEDAR SHINGLES

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BY  
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Company  
LIMITED**



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**Bigger Crops, Better Quality, Higher Prices**  
—If You Use—

## "Best-by-Test" FERTILIZERS

This brand of Fertilizer is noted for high plant food value and the analyses are guaranteed in every bit of it sold. Write for free book on Fertilizer giving information as to kind and quantity to use for different crops. Farmers club together and order in carload lots and get special rates. Full particulars on request. Local Agents wanted.

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This principle of mutual strength applied to insurance has brought security and protection into the homes of more than 50,000 Mutual Life Policyholders in Canada.

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An all-British and all-Canadian Company.

Write for booklet entitled "Ideal Policies."

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Waterloo, Ontario

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For the Big Ranch, or the small farm, put up a fence that will last a lifetime, that does not serve only as a mere boundary line, but one that gives real fence service—one that is built strong enough to withstand the onslaughts of stock as well as the ravages of all kinds of weather.

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Send for Literature and address of nearest agent. We also make a complete line of poultry and ornamental fencing. Agents nearly everywhere. Agents wanted in unassigned territory.

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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:

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**HON. G. H. FERGUSON, Minister of Lands, Forests and Mines.**

# It's a money-saver— this book we send you free

It's no exaggeration to call this book—

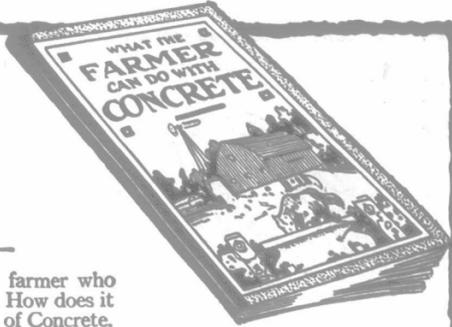
**"What the Farmer can do with Concrete"**—

a money-saver. It makes money by saving money—for every farmer who reads it and who acts on the advice and instructions it contains. How does it save money? Simply by telling how to build farm improvement of Concrete.

The farmer nowadays realizes that he is under a terrible handicap in his efforts to make money, if he has to be constantly sinking profits in repairs. Only by using Concrete can he have buildings that do not call for repairs and painting. Only with Concrete for his building material can he have his farm fire-proof, waterproof, watertight, repair proof, vermin

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By building Roads of Concrete we can reduce the cost of living, and at the same time increase the farmer's profits on everything he sells or buys.

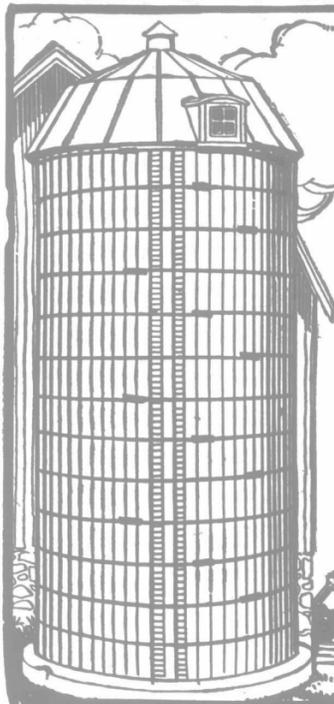
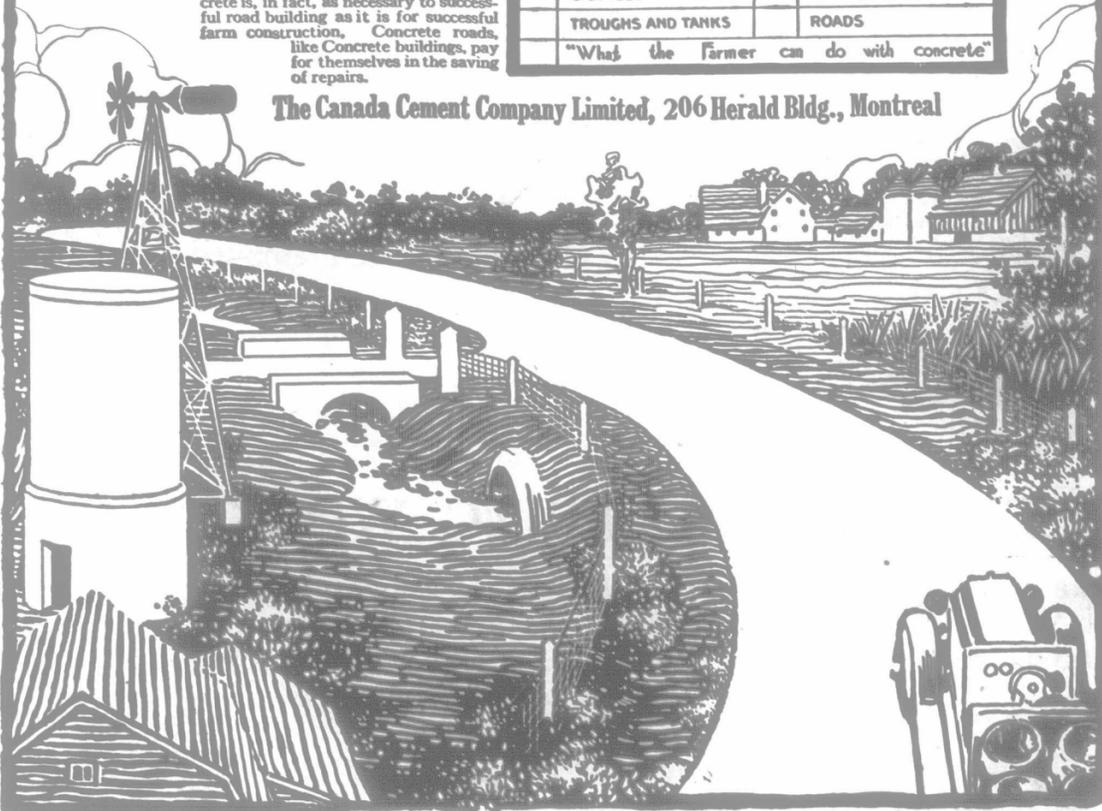
The welfare of the farm demands Permanent Highways of Concrete. Our farmers need them for the hauling of garden-truck, fruits and dairy products into town. On Concrete alone can this hauling be done economically. It provides the only surface that resists the wear and tear of modern traffic. Concrete is, in fact, as necessary to successful road building as it is for successful farm construction. Concrete roads, like Concrete buildings, pay for themselves in the saving of repairs.

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CONCRETE BLOCKS	BARNs
SILOS	FENCE POSTS
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"What the Farmer can do with concrete"

The Canada Cement Company Limited, 206 Herald Bldg., Montreal



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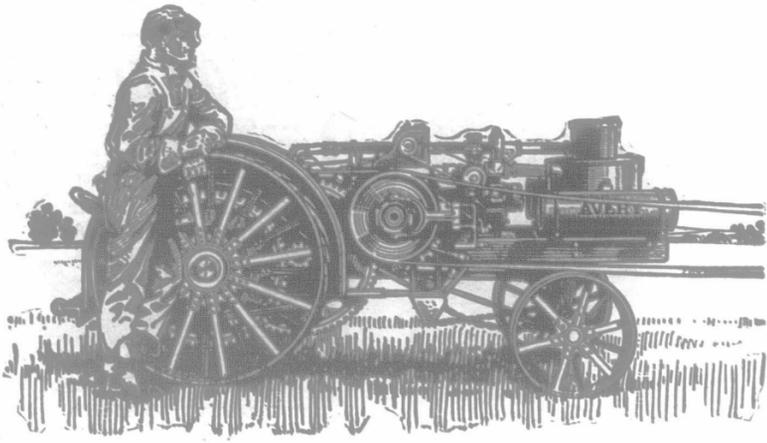
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LIII.

LONDON, ONTARIO, FEBRUARY 28, 1918.

1327

## EDITORIAL.

General Disorder seems to be in supreme command in Russia.

The Russian Bear seems to be dancing to everybody's music.

Every farm should produce at least some good seed of some crop this year.

If more hogs are produced more feed must be arranged for from the home farm.

The Canadian Government is making it easier for the farmer to own his own tractor.

A February thaw does not necessarily mean an early spring. Make the feed hold out.

If Canada does not want a German-made peace Canada must produce more food than ever before.

If you decide to sow spring wheat this year be sure to put it on your strongest land.

Spring ought to be just around the corner. The spring and summer catalogues arrived some time since.

The consensus of opinion seems to be that threshing gangs would help solve the fall labor problem in Ontario.

Canada has no sheep to go to the dogs but many dogs that might well be spared to take their last long journey.

Most eminently successful stock breeders owe their success to an outstanding sire used in their studs, herds or flocks.

Remember it requires food to grow plants just as it does to grow live stock. Feed the farm and it will supply food for both man and beast.

Since the corn for the extra brood sow has not arrived from the South it might be safer to plan to grow the extra pig feed on the home farm.

Judging from the great number of auction sales of dairy cattle, milkers must be scarce or the price of milk and its products not high enough—either or both.

No farm should be without a good garden and in it there should be plenty of small fruits as well as vegetables. Now is the time to select plants and seeds.

The selective draft takes men to fight. What would be wrong with a fair system of selective draft to get men to produce food and other necessities for the fighters?

The President of a leading American University recently stated that the uncertainty of Food Control had not made for increased production. It never can.

Quoted prices of root seeds should bring home to the grower of field roots the necessity for producing these seeds right here in Canada. Try it on your own farm.

We all admire the girl, whose two brothers are at the front, for throwing the frying pan at her exempted suitor when he told her of the good times he had planned for this summer—that he didn't need to work and was buying a new automobile just to take her out driving. We hope she scored a direct hit with that old frying pan.

### Preparation Week.

How would it do to make next week "preparation week"? Spring is drawing near. Labor for seeding will be scarce. Everything should be ready. Preparation week would ensure that the supply of seed was cleaned and all the implements, machinery, harness, and necessary appliances were ready for the field on the first day that the land will work. Increased production cannot be left to chance. Good seed early seeding and seed well put in will be big factors. To ensure all these, clean the seed in preparation week. Clean it and reclean it until nothing but the large plump seed remains. Some of it may be bagged ready to go to the fields if the granary is free of mice or it may be placed in specially cleaned bins ready to be bagged. Have the grain bags patched, clean, and ready for the seed. Purchase a supply of formalin with which to treat the seed for smut. Then go over all the implements and machinery. Get the harrow teeth sharpened. Tighten all loose nuts. Repair all worn or cracked parts. Oil the harness and have it put in repair. Get an extra whiffletree or two ironed in case of a break in seeding and always have an extra double-tree on hand. Begin to put the horses in condition. Preparation may take longer than one week and it will pay to start early and have everything ready for a maximum day's work each day after the land is ready for the seed.

### The Farm Wood-lot.

The real value of a farm wood-lot is manifested in a season such as this country has just experienced. Wood may not be as cheap fuel as coal but a good wood-lot on the farm is security against any fuel shortage and sound, dry hardwood such as beech and maple is very satisfactory fuel for stove or furnace. The fuel problem in Canada is likely to grow even more acute as the years go by and farmers who have a little broken land on their places should plan and plant for the days to come. Where a wood-lot remains it would be wise to fence it away from the live stock so that the young growth may flourish unmolested and the older trees remain vigorous. Pasturing is death to trees. Grass bottoms cause dead tops. Cattle eat off all young growth. A wood-lot cannot flourish with live stock running through it. A thick growth should be encouraged to keep down grass hold the leaves and ultimately form that rich leaf mold common in dense forests over the entire surface. Wood-lots should be culled for wood. Cut the diseased trees—those showing dead tops or any that appear unthrifty. Undesirable varieties should be taken out to allow the choice to do their best. In a lot where the trees are thin, after fencing, nature might be aided in her efforts to re-timber the land by planting. Young trees may be secured from the Forestry Branch of the Provincial Government. A wood-lot for every farm would be a good motto for Old Ontario.

### A National Winter Fair.

Movements are already on foot toward the establishment of a large, national or international, winter live stock exhibition in Canada. We have in this country a number of Winter Fairs good of their kind but looked upon as provincial or more or less local affairs. A number of the leading stockmen of the country believe that Canada should have a big and final round-up of live stock each year and that it might be well to encourage competition from across the border. Certain men connected with the Board of Trade in the City of Hamilton have been busy on such a proposition for some time, and last fall called together a number of stockmen to discuss the subject. The Management of the Canadian National Exhibition Toronto has already taken up the idea and is putting forward all the strong arguments in favor of Toronto as the place

to hold the proposed show. Possibly other cities may have something to offer. The Live Stock Associations recently assembled in annual meetings in Toronto, appointed delegates to confer on the matter and until they report it is perhaps wiser to say little regarding the proposition but it would be well for the stockbreeders who must be depended upon to put up the show if it ever becomes a reality to insist upon managing their own show. True, buildings must be had and these are only available in a large city. Moreover, a large city is the only place that can accommodate a crowd of people. But a winter live stock show controlled and operated by a number of controllers, aldermen and other city officials stands very little chance of being a lasting success. This should be remembered by both stockmen and city officials. A live stock show must be controlled by live stock breeders otherwise it cannot get their whole-hearted support. The city in which the exhibition is to be held must have representation on the Board, but not in such numbers and spirit as to entirely dominate it. This should be remembered and wherever the show is located stockmen should be sure their show will be practically in their own hands. This means success which will be of value to the industry to the city in which the show is held and to all Canada.

### Fall Fairs Should "Start Something."

Practically all the delegates to the recent convention of the Ontario Association of Fairs and Exhibitions were obsessed with the idea that the School Fall Fair was injuring the Fall Fairs held by the agricultural societies. The convention appeared unanimous in the desire that the Department of Agriculture should amalgamate the two wherever possible, and thus eliminate that competition through which the ordinary and time-hallowed township fair was suffering. One delegate asked for this concession on the grounds that the School Fair in a certain township was able to draw 1,500 people, whereas the agricultural society could only muster less than 500 within its gates on Fair Day. To the unprejudiced ear this argument sounds very similar to what a manufacturer with antiquated and worn-out machinery might advance in asking protection against a modern and efficient plant. The School Fall Fairs are a unique institution, inception for a special purpose and operated in such a way as to interest the youth in things agricultural as well as train him in organization and executive work. If this is being accomplished it does not seem right to erect any obstacles or bury one type of fair in the other, to the detriment of both. Too frequently the Fall Fair is nothing but an event where a performance, cleverly christened "Tests of Speed," is camouflaged by a few tents and fewer farm-team wagons with some sheep and swine in them. Any association with such would imperil the School Fall Fair.

The annual Fall Fair should go on its way and appeal on its own merits. Perhaps a few of the smaller and less prosperous ones should amalgamate; there are instances in Ontario where this has been done successfully. The element of youth seems necessary now to insure the success of any organization and the Fair Boards should bear this in mind. Graduates from the School Fair will make progressive and efficient directors for the agricultural society in days to come and upon their shoulders will rest considerable responsibility. The Agricultural Society of Wilmot Township realizes the healthful influence of youth. They employ a progressive young Secretary and cater to the young men and school children of the township. From these two latter classes they know recruits must be enlisted to carry the burden of responsibility. That society feels that the School Fair is a benefit in spite of the fact that it competes with the annual township fair. The children exhibit at both events and get their parents interested. The Agricultural Society in question has special sections in the prize list for school exhibits and an extra effort

# The Farmer's Advocate

## AND HOME MAGAZINE.

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is being made next year to attract the young exhibitor. If the agricultural Fall Fairs of the Province would "start something" would release the "soft pedal" and try something new they would not need to worry over the success of the School Fall Fair and the competition it presents.

### The Fruit Grower and the Labor Market.

Had it not been for female help such as the National Service Girls provided last year, fruit growers would have found it difficult to handle their crop. The Trades and Labor Branch of the Ontario Government promise to enlist even more helpers of this kind for 1918 if the growers will guarantee a satisfactory minimum wage so the Branch can offer ample inducements to recruit them. No doubt the girls are actuated by patriotic motives when they go to the country to do all kinds of work and suffer hardships but they like to have a little money left for their services after paying transportation, board and buying clothes suitable for working in. The growers are willing to pay all their business will afford, but any special concessions to the National Service Girls in the way of wages would be a disturbing influence in the labor market of the district. An agreement was reached at the Fruit Growers' Convention held recently at Toronto and there is every reason to believe that a great number of girls will volunteer.

One thing growers should bear in mind: These young ladies cannot afford to travel long distances to only work half the time, and besides, the farmer cannot afford to pay them the weekly minimum wage if they are not working. Every grower who intends to use them should plan to have crops that will mature consecutively or require labor throughout the season. Fruit and vegetable growers are in a position to adjust this matter more easily than are others.

The worst slacker is the man who gains exemption on the ground of being of better service to his country at home than he would be in the trenches and then proceeds to loaf. All men at the front are workers and there should be no shirkers at home.

### Getting Rid of the Mortgage.

By ALLAN MCDIARMID.

A good deal of attention has been given by the newspapers recently to the fact that the farmers of Frontenac County have paid off, almost entirely, the chattel mortgages that have been held against them. Some editors have commented on it and have taken it as an indication that farmers as a class are making too much money and besides, that they are making it at the expense of the rest of the country. There may be something in it, but at the same time no one really expects the farmer to take less than he is offered for what he has to sell. He is simply accepting market prices for his produce as he always had to do, even when that price was so low that he was unquestionably working for nothing along some particular line. But the law of compensation comes in sooner or later and the balance is restored. The recent upturn in prices is, of course, partly due to the war, but a change was coming anyway. In the nature of things it had to come. The population of the cities was increasing and that of the country was becoming less, with the consequent lessening of food supplies. The men who stuck to their jobs through the times of depression and low prices are now in some measure getting their reward, while those that became discouraged and moved to the city in search of easier work and better pay are now complaining because of the high cost of living, which, to a certain extent they are responsible for, because of the fact that they left the ranks of the producers. Of course, we are sorry for them, but we can't resist the inclination to point out the cause of their trouble.

At the same time a good deal of sympathy is due those city-dwellers who never left the farm, for the reason that they never had one to leave and who cannot get "back to the land" for the simple reason that they haven't the means. No mistake, it must be something of a hardship to have to pay present-day prices for the necessities of life when they think of what these same things could be bought for a number of years ago. Quite by accident I came across some copies of "The Farmer's Advocate" recently, that bore the date of 1901, 1902 and 1904. Out of curiosity I turned to the market pages in them just to get a comparison of the prices paid then with those of the year 1918, as it is the year with which most of us are particularly interested at present. The first thing I noticed was a comment on the beef situation. It was that "Mr. Con. Woods has the credit for paying the highest price recorded on the Toronto market for beef cattle for a number of years. \$5.25 is quite a record."

But the correspondent from Prince Edward Island makes a record of another kind. He tells us that they are selling cows to the canneries down there for three and a half cents a pound, dressed.

The comment on the hog situation was that "prices are not to be complained of." Proof of this was found in the fact that live hogs were selling at \$4.75 a hundred, while the dressed article brought as high as \$6.00, presumably for best quality light-weights.

The market for lambs was quoted as being firmer, good lambs selling at \$2.50 apiece. Good milk cows were said to be in demand. From \$25.00 to \$45.00 was being paid. It must have been something fancy that brought out the latter price. Horses for South Africa were being bought at \$50.00 to \$75.00 a head. The situation was summed up in these words: "People in the live-stock business do not seem to have any ground for complaint at present." It's pleasant to know that apparently all farmers were happy and contented in those days. We had not, at that time, acquired the habit of grumbling at the price, as a matter of principle. The next thing I noticed was that cow hides were bringing 5 cents a lb. for No. 1, and that unwashed wool was worth 8 cents. The latest quotation on wheat was 62 cents a bushel. Oats were 28 cents. Peas 70 cents. Barley 40 cents. Corn 52 cents. Rye 53 cents, and beans (choice prime) were selling at \$1.15.

The farmer's wife must have been of as happy a nature as the farmer himself, for we don't hear of her complaining over the fact that eggs brought only ten to eleven cents a dozen. And the price of dairy butter couldn't have helped to console her very much. It was selling then for thirteen and fourteen cents a pound. Her chickens brought her 40 cents a pair, her turkeys 14 cents a lb., and her geese 9 cents. The old saying that "Man wants but little here below," must have applied to women as well in those days, if their wants were in proportion to their ability to satisfy them. Spring hats and fall bonnets must have been planned on a moderate scale, comparatively, in the early days of this country.

Some other price quotations were those of potatoes at 20 cents to 23 cents a bushel, honey at 7 cents a pound and cheese at eight and a quarter cents as a ruling price, with slight variations at the different Boards. We didn't know then that in considerably less than twenty years we would be entering protests and doing all sorts of kicking over the fact that all we could get for our cheese as an average price for the season was twenty-one and a quarter cents. On the other hand, however, we find that red clover seed was selling then at \$6.25 a bushel and timothy seed at \$1.80. These are things that the majority of farmers have to buy, as well as such by-products as shorts and bran. Shorts are quoted at \$16.50 a ton, and bran at \$13.00 a ton. Exceptional items such as these helped to even things up a little, but on the whole the farmer's cash income was easily counted in those days. It isn't surprising to hear that the mortgages that were placed on farms at that time are now being cancelled. And no one should begrudge the farmer his increased income when he uses it to purchase his freedom in that way. Getting rid of the mortgage has been the main aim and object in the

life of many a hard-working son of the soil, and when he has accomplished this object he should be congratulated because of a worth-while achievement and not be condemned as a profiteer.

### Nature's Diary.

A. B. KLUGH, M. A.

Canada-From Ocean to Ocean.—IX.

When we travel west from Central Ontario we pass along the north shores of Lake Huron and Lake Superior through a country in which coniferous trees predominate and the same sort of country extends for some distance into Manitoba. Then we come to a region of deciduous trees, poplar being the main species. The fauna of these regions is practically the same as that of the same types of country in Ontario with which we have already dealt. But when we come to Carberry we are getting out on the prairie, out on to that vast slightly undulating plain which stretches from Western Manitoba through Southern Saskatchewan and Southern Alberta to the foothills of the Rockies.

There are a great many plants and animals which are characteristic of the prairies. The main features of the vegetation are the grasses, of which there are many species all different from those of the East, and the abundance of plants of the Daisy Family, (Compositæ), and the Pea Family, (Leguminosæ).

Among the animals of the prairie none are more characteristic than the Gophers. The name, Gopher, now in common use in the West is derived from the French "goufre", a honeycomb, and was given to these animals because their burrows honeycomb the soil.

Commonest of all the Gophers in our prairie region is the Gray Gopher, (Thomomys talpoides), also called Northern Pocket-gopher, Mole-gopher, and Pocket-mouse. The body of this species is 7 inches in length and the tail is 2 3/8 inches long. In color it is dark grayish, browner on the back and slaty below, nearly white on the chin, throat, feet and tail.

The front feet of the Gray Gopher are large and furnished with long claws and are thus admirably adapted for digging. Speaking of the burrowing of this species Seton says: "The Gopher leads the life of a mole, living in a burrow which is about three inches wide and ramified indefinitely near the surface. It throws up a mound every few feet, but in some cases a gallery is run for twenty or thirty feet without a mound appearing. Its method of burrowing, as observed in captive specimens, is to loosen up the earth with the powerful front claws as it stands with its hind feet advanced and wide spread, then throw it backward between the hind legs, to be further passed on by the hind feet, and when a sufficient pile has accumulated, the Gopher turns round and pushes with its broad head and powerful front feet, forcing the pile ahead of it to the first side gallery, up that and out, usually without exposing itself. The earth is always moved thus, not in the enormous cheek, as some believe. In all my experience I have never known these to serve for anything but provender bags. In one or two cases I have found a little earth in the pouches, but obviously it came from roots which the creature was carrying home.

"One of the most curious characteristics of its fore-paws is their perfect prehensibility. This is attained, not by a true digital prehensibility, but by the long claws working against the large pad."

The food of the Gray Gopher consists of roots, grain, grass and the leaves of various plants. Of these it lays up large stores for the winter in chambers off its burrows.

Its burrows are of two kinds, forage and residential. The forage burrows are those which it runs to get at the roots of plants. The residential burrows consist of a central chamber with several galleries and one or more chambers on these galleries. This species and some other species of gophers have the habit of making an opening from the burrow to the outside on sunny mornings and then plugging this opening with earth towards noon. It is supposed that this is practiced as a method of ventilation. That the Pocket Gopher practices the first principles of sanitation is shown by the fact that it has special pockets off its galleries and chambers in which it deposits its excrement.

While the Gray Gopher spends most of its time underground and by means of its forage burrows secures the roots of plants it makes short excursions from its burrow under cover of night in search of grass and grain which it carries off in its pouches to be consumed at leisure in its burrow. Since its journeys above ground are nocturnal it is obvious that its chief enemies are the owls, though the badger, fox, weasel, coyote, and hawks are also to be counted as such. Of these animals the weasel can follow it in its burrows if it can gain entrance to them and the badger can dig it out.

It is a well established fact that there are no native earthworms in the prairie region. It is true that in the older-settled parts of the prairie provinces there are now, in some places, fair numbers of the common earthworm, introduced from Europe to North America, but these are of very recent introduction having been brought in with potted plants. In the absence of earthworms how are we to account for the black loam from one to two feet in depth which exists over large areas of the prairies? There seems but little doubt that the Gophers are the agents which have brought up the lower layers of the soil and thus mixed it with vegetable remains so that a loam results, and that in this way they have played the same part which is taken by earthworms in other parts of the world.

(To be continued.)

# THE HORSE.

## Veterinary Prescriptions for Farm Use—I.

Having in a previous issue given a list of many of the drugs that should be kept in "The Farmer's Veterinary Medicine Chest," we follow with some prescriptions. In most cases, medicines that are useful for either internal administration or local application give better results when two or more drugs are mixed than when but one drug is used. The average proprietary medicine on the market doubtless has value for certain purposes, but the advertised virtues are so many and varied that a person is at a loss to know when and where to use it. Many of these preparations are highly recommended for both internal administration and local application. They are said to produce wonderful curative effects in cases of diseases of the digestive, respiratory, urinary and generative systems, promptly cure a case of indigestion, diarrhoea, sore throat, dyspepsia, any disease of the lungs, brain trouble, kidney trouble, etc., and, by local application effect wonderful cures in cases of wounds, bruises, sprains, skin disease, enlargements of all kinds and natures, whether painful or not, bone diseases of all kinds, fistula, lump jaw, etc.; in fact, the same medicine, whether given internally or applied externally is highly recommended for diseases diametrically opposite in nature and effect. In many cases such claims are backed up by copies of testimonials by those who have used them. A little consideration should convince a man that the same prescription cannot be successfully used as a cure for diseases that are essentially different in their nature, and of necessity should be treated with the idea of producing directly different results. For instance, a wound or raw surface requires a dressing that establishes an action different from that would be serviceable for the reduction of a swelling, or a chronic enlargement. For the former, an antiseptic, cooling, astringent lotion is indicated; while for the latter a stimulant, irritating, or absorbent dressing is required. In view of these facts, we take the liberty of giving a few of the standard prescriptions that are used in general veterinary practice for the treatment of simple cases, mentioning the cases for which they are useful, and the mode of application or administration. In some cases we may mention a drug that is not included in the list referred to, but where this is done there will be no need of haste, hence the drug can be procured.

### White Lotion.

Acetate of lead.....1 oz.  
Sulphate of zinc.....6 drams  
Water.....1 pint

This is an old prescription that has stood the test for many years. It is antiseptic, cooling, astringent and non-irritant. It costs little, is applied by the hand, and is safe to use. It is useful for fresh wounds, sore shoulders, sore necks or backs, scratches, mud fever, etc.; in fact, gives good results on any raw surface. It also relieves itchiness in case of surfeit or other skin irritation. In cases of scratches, or mud fever, in cold, dry weather, the astringent action may in some cases be too great, and cause a tendency for the crack to re-open; hence, in such cases, the dressing should be alternated with an ointment or an oil.

### Stimulant Liniment.

Alcohol.....2 fluid ounces  
Oil of Turpentine.....2 fluid ounces  
Liquor Ammonia Fortier.....1 fluid ounce  
Water to make.....1 pint

The addition to this of one-half ounce gum camphor makes a camphorated stimulant liniment, which many prefer. The addition of the camphor does not materially increase its usefulness, but gives to it a pleasant odor. This liniment differs essentially from the white lotion. It is stimulant and irritant. It is applied by the hand, and in order to get results should be applied with smart friction, (well rubbed in.) It is useful in cases of sprains or bruises, after the acute inflammatory action has been allayed by heat and soothing applications. In cases of slight chronic enlargements resulting from sprains, bruises or other causes, its application, followed by bandaging, tends to increase the activity of the absorbents and reduce the enlargement. In case of bandaging following its application, care must be taken to not repeat it too often else it will blister. This liniment will mix with water in all proportions, hence the addition of water will weaken it which is often advisable, and is indicated by it causing too great an irritation to the skin. The attendant must be the judge of the action required and make the liniment strong or weak as required. Of course a liniment of this nature should never be applied to a raw, irritated, tender or acutely inflamed surface, except where the tenderness has been caused by previous applications of the liniment and a continuation of the irritation is desired to reduce enlargements and hasten absorption.

### Carron Oil.

What is known as "Carron Oil," is made by mixing equal parts of raw linseed oil or sweet oil and lime water.

Lime water is made by slacking a small lump of lime, say the size of a goose egg, in a pail, then filling the pail with water, stirring it thoroughly with a stick and then allowing it to stand. The undissolved lime settles at the bottom and the clear liquid on top is lime water.

This mixture is practically a specific for scalds and burns, especially serviceable in veterinary practice for what are called "rope burns," caused usually by the

animal getting his foot over a rope and in his struggles to get loose practically burning the posterior surface of the pastern by friction on the rope. This accident frequently causes a severe case of scratches. In the early stages, as in cases of real burns or scalds, caused by fire, coals, hot irons, etc., or by scalding water or other fluids, or by steam, the free and frequent application of carron oil allays pain, soothes, and tends to prevent cracks and sloughing, (when the burn is not too severe,) and often effects an early cure of what otherwise would have been a serious and tedious case to treat. WHIP.

## LIVE STOCK.

### Quebec Stock-Breeders Meet.

The General Stock Breeders' Association of the Province of Quebec held its 24th annual meeting in Montreal on Feb. 14. This Association is the federation of the four principal local breeders' associations, namely: Sheep Breeders', Swine Breeders', French Canadian Cattle Breeders' and French-Canadian Horse Breeders. Each has its own board of directors and its by-laws and is responsible for the proper keeping of its books. It is represented by its president on the board of directors of the central association, its members being likewise members of the larger body. The latter deals only with questions of general interest to the livestock men of the province, while the various affiliated associations look after their own local matters.

The President, Hon. N. Garneau, M. P. P., reviewed the work of the association during the past year, remarking that he had been one of its founders and had seen the membership grow from forty to nearly a thousand. During that period considerable progress had been made in the quality of stock bred owing to the sales that had been instituted. These are held, not for the purpose of revenue, but for helping farmers to improve their live stock. The result of the eighth sale of pure-bred stock at Montreal and Quebec last October, resulted in a deficit of \$381.19. At these sales 97 head of cattle, 120 sheep and 76 swine were sold. The fact that the prices received were very much higher than in previous years when the deficit ranged from two to four thousand dollars is pretty fair evidence of appreciation on the part of the farmers.

During the past year, the following animals were registered: 298 French-Canadian cattle, 45 French-Canadian horses, 2,078 sheep and 2,346 swine. The Secretary, Dr. J. A. Couture, in his report, stated that the membership was 939, made up of the four affiliated associations. The receipts for the past year were \$21,652.92 and the expenses \$19,030.31, leaving a balance on hand of \$2,622.61.

The members were addressed by both the Federal and Provincial Ministers of Agriculture, Hon. Sydney Fisher, H. S. Arkell, Dominion Live Stock Commissioner, in addition to several Quebec devotees of the live-stock industry.

Hon. N. Garneau, who presided at the sessions, claimed, amid enthusiasm, that the province of Quebec holds the first place in Canada for the breeding of Ayrshire cattle and the second place for Holsteins. Moreover, that it furnished more members to the National Sheep Breeders' Association and the Swine Breeders' Association than any of the other provinces.

Mr. Arkell emphasized the fact that with the coming of post bellum days the price of victory would have to be

met in the form of a war debt, the liquidation of which, depended upon better live stock and more of it.

The election of officers, resulted as follows: Hon. N. Garneau, M. P. P., President; Arsene Denis, 1st Vice-President; Jas. Bryson, 2nd Vice-President; Dr. J. A. Couture, Secretary; Louis Thoun, Victor Sylvestre, Napoleon Lachapelle and Louis Lavallee, Executive. "AGRICOLA."

### Championship Live Stock Judging Competition.

On February 14 and 15 the winners of the Peter White Trophy and the winners of the Duff trophy met and competed for championship honors. The winners of the Duff Trophy at Guelph were I. Wench, C. Young, and F. O'Sullivan, with District Representative J. C. Steckley, of York County, and these young men were successful in securing the championship honors from J. Gauthier, A. Kennedy and J. Kennedy, of Glengarry County; District Representative, D. E. McRae. The Glengarry County boys had a big lead in dairy cattle and also had the lead in sheep, but the York County boys secured enough points in beef cattle, horses and swine to give them a lead of 189. These two teams were the winners in the Inter-County Live Stock Judging Competitions, held at Guelph and Kemptville.

### Pig Profits.

EDITOR "THE FARMER'S ADVOCATE":

I enclose an account of pig feeding, re cost and profit, as it may interest some of your readers.

During the fall of 1917 my sow raised ten good pigs. I sold six of them, and the remaining four I fed for market, and in order to take advantage of the top price I sold these pigs, weighing, at 4 months and three weeks old, 720 lbs, an average of 180 lbs. each, at \$18.00 per cwt. Following is account for feed: 11 cwt. of shorts, at \$2.25 per cwt., \$24.75; 15 bushels of oats at 85 cents per bushel, \$12.75; 10 bushels of barley at \$1.15 per bushel, \$11.50. The total value of pigs at selling time was \$129.60, cost of feed and chopping, \$49.70, profit \$79.90.

No account was kept of what little skim-milk they got at weaning time, which leaves a fair profit to pay for time and labor spent.

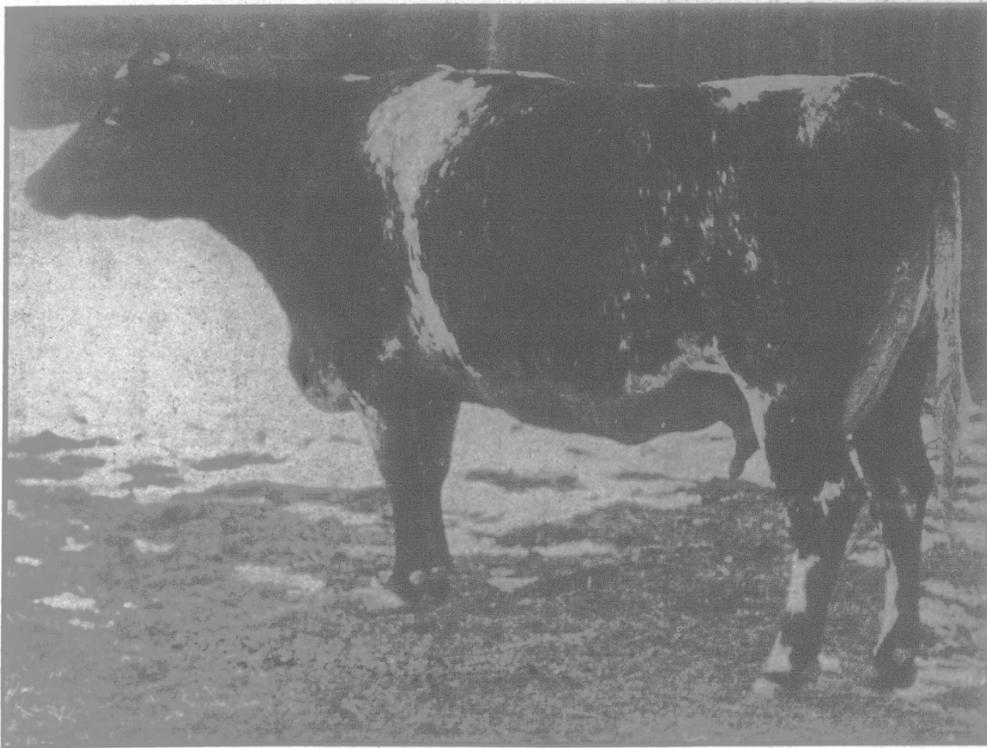
Huron Co., Ont.

J. P. COLE.

### The Lindsay Pure-bred Sale.

The Victoria County Pure-bred Live Stock Association were well pleased with the results of their sale held at Lindsay, on January 29. Prices ranged from \$75 up to \$300; 26 head sold for \$150 or over, 11 of which went at \$200 or over. Thomas Wilson of Ops contributed the highest priced animal, namely, Bandmaster, a bull, which sold for \$300. W. R. Greenway contributed some Lavender-bred stuff which sold from \$150 up to \$225. Scotch Laird, brought out by A. E. Swain realized \$295. A good attendance was on hand to bid.

Canada's man power is to be registered again. Unless something more radical is done essential industries will go short-handed while many continue to put in their time at work which matters nothing toward the winning of the war.



Buttercup = 111906 =.

Record: 12,691 lbs. milk and 482 lbs. fat. Champion three-year-old Shorthorn heifer in R. O. P. Owned by G. W. Carter, Pinehurst Farm, Ilderton, Ont.

GESTATION TABLE.

DIRECTIONS FOR USE OF TABLES.—Find the date of service in the first column; then, on the same horizontal line, and under the heading of "mare," "cow," "sow," or "ewe," whichever it may be, write the name or number of the animal. The date next to this is the date of the expected birth.

JAN. MARE Dec. COW Oct. SOW April EWE May. Table with 31 rows and 5 columns.

MAY MARE April COW Feb. SOW Aug. EWE Sept. Table with 31 rows and 5 columns.

SEPT. MARE Aug. COW June SOW Dec. EWE Jan. Table with 31 rows and 5 columns.

FEB. MARE Jan. COW Nov. SOW May EWE June. Table with 31 rows and 5 columns.

JUNE MARE May COW March SOW Sept. EWE Oct. Table with 31 rows and 5 columns.

OCT. MARE Sept. COW July SOW Jan. EWE Feb. Table with 31 rows and 5 columns.

MAR. MARE Jan. COW Dec. SOW June EWE July. Table with 31 rows and 5 columns.

JULY MARE June COW April SOW Oct. EWE Nov. Table with 31 rows and 5 columns.

NOV. MARE Oct. COW Aug. SOW Feb. EWE March. Table with 31 rows and 5 columns.

APRIL MARE March COW Jan. SOW July EWE Aug. Table with 31 rows and 5 columns.

AUG. MARE July COW May SOW Nov. EWE Dec. Table with 31 rows and 5 columns.

DEC. MARE Nov. COW Sept. SOW March EWE April. Table with 31 rows and 5 columns.

EDITORIAL... our Pr... the en... cupera... and h... issues... of thos... elemen... The... horticu... to a fut... Fro... the agr... of the... of our... appear... literatu... order v... the De... founde... Union... annual... 000 ca... life oth... provide... ivorous... other d... the wo... his des... and the... discove... of the s... of swal... depreda... were no... day, th... revel in... of its fo... One... plea for... slaught... chance... blind... An arti... near to... of a dea... to the b... its you... them in... limb an... slaught... rearing... all othe... chicken... have se... ed, the... surveyin... white gr... in the c... banish h... The... to be en... tastes... Continu... ously d... it eats n... in habit... not exist... insect e... laws an... and a sc... English... number... during t... mately t... blind cl... inches v... in the t... soon spo... a raking... ber 10 s... The... barn du... in mice... The... premis... natural... Adve... sure in... taste is... comes t... and rats... of the w... rows. I... found o... not seen... business... on the s... Shou... nearby... thieving... frisky sc... among t... extermin... neighbor... rob the... branch,

# THE FARM.

## Destroy the Enemies of Song and Insectivorous Birds.

EDITOR "THE FARMER'S ADVOCATE":

Among the timely suggestions accorded space in our Provincial Journal there is none more needful than the encouragement of song and insectivorous bird recuperation. The question of gratifying agricultural and horticultural attainment is one of the foremost issues of the hour, and as a consequence the fostering of those resources remains a requisite in the producing element for the supply in demand.

The insects that wage destruction to the farm and horticultural pursuits are legion, becoming dangerous to a future perfection of development of the product.

From year to year the appeal has been transmitted to the agricultural thrones asking for adequate promotion of the insect feeders that obviously battle the insect life of our Dominion, and so far as known at present there appears no door wherein instructive and illustrative literature on bird lore may be obtained, and be it in order we may well credit the U. S. Biological Survey of the Department of Agriculture at Washington, a well-founded system that is broadcasting the warning over the Union. In a sectional statement therein I find the annual loss to U. S. agriculture approximately \$80,000,000 caused through the ravages of insects, that bird life otherwise might have saved. It is apparent nature provided a safeguard through the avenue of insectivorous agencies to prevent the scourge by insects and other detrimental agencies. Years ago, in this neck of the woods, the naturalist and ornithologist could satisfy his desire to overflowing in the study of his pursuits, and the chemists' formula for spraying was yet to be discovered. The birds held sway in countless thousands; the heavens were densely freckled with the several species of swallows mobilized against the evil doers. Insect depredations were of so slight a form that the trails were not in sufficient evidence to cause suspicion. Today, the enemies of our feathered friends, unfortunately, revel in the predominant forces of the many characters of its forms like many other obnoxious elements.

One of the foremost is the crafty crow; it has no plea for its life, is a villian throughout, and a merciless slaughterer of insectivorous bird life. Shoot him if the chance is afforded by baiting within gun range of a blind. Poison him also with caution to valuable life. An artificial decoy nest of a half dozen or trio of eggs near to the blind works wonders—as well as the remains of a dead animal. I have seen this black demon steal up to the happy domicile of a nesting song bird and pluck its young despite the defences of the parent birds, tear them in shreds and swallow them, then fly to a nearby limb and exult to his black brethren over his murderous slaughter and feast. Their chief diet throughout the rearing period of their young is the innocent song birds, all other sustenance is secondary on the menu—young chickens and wild ducklings are among the savory. I have seen endless numbers of wild mallard nests plundered, the eggs punctured and contents drawn out, and when surveying the newly planted corn field if he swallows a white grub it's a mistake—there are no ethics to observe in the death of a crow. He is a curse, kill him and banish him.

The English Sparrow is a sorrow, almost too great to be endured. He has no attraction in plumage, low tastes, imprudent disposition and persistent fertility. Continually does it crowd out its superiors or pugnaciously drives them away, and except on very rare occasions it eats neither insects nor weed seeds. It has no song and in habit is a bird of the street and the gutter. It should not exist in this country. If it were banished our native insect eaters of song and beauty could return to the lawns and orchards. The English Sparrow is a nuisance and a scourge. You swat the fly—still greater swat the English Sparrow. My winter method in reducing their numbers I find of practical value. About the premises during the period of snows and over a range approximately thirty-five yards from some convenient screen or blind clear away the snow in parallel lines eighteen inches wide; scatter lightly, screenings or similar food in the trail the last half of the range. The pests will soon spot their decoy, and when well assembled guarantee a raking shot. Let them have it then with 1 1/4 oz. number 10 shot. My last kill in this manner was thirty-six.

The entertainment of the little screech owl in the barn during the winter months will avail better results in mice and sparrows than a half dozen cats.

The planting of shrubbery forming thickets about the premises is among the attractive lures that establish the natural rendezvous for the songsters.

Adverse to bird life is the house cat. This enemy is sure in time to fall deserving of death, for once the taste is acquired for bird life it never leaves, and it becomes the greatest four-footed enemy known. Mice and rats ignored, the former home forsaken for the haven of the wooded copse and the brushy and weedy fence rows. Don't let him escape or get away when he is found out on his hunting trips. The chances are he has not seen home for weeks. When you meet one poke the business end of the gun to the right place and kill him on the spot.

Should the season favor you with a nest of song birds nearby, guard it with a close vigil for in as much as the thieving red squirrel merits note for its cuteness and frisky scampering it also is committed for banishment among the pests of evil doers, and ten to one it will exterminate the whole colony of little songsters in the neighborhood. I have repeatedly seen this red imp rob the nest of its young birds, scamper to a nearby branch, rear upon its haunches and grind the victims

into mince. The warning of the old birds' dolorific cries will sound the alarm and that is the time for the man with the gun to get busy.

It is evident the enemies of our feathered friends should be sought out with unlimited vengeance for their complete annihilation and with this end in view the Departments of Agriculture may well solicit in many ways the timely support of farmers and many others in joining the raid to assist in destroying the vermin annually consuming a valuable asset to the country.

The Ontario Department of Agriculture at Toronto have issued for 1918 an attractive calendar, and appended to each there are innumerable timely suggestions corresponding with the month's forecasts in the many branches of the farm work. It is regrettable to note that not a word was said or even a hint given re protection of birds.



A Champion Yorkshire Sow. Exhibited by John Duck, Port Credit, Ont.

Spray formulas are timely necessities, but at the same time we might as well give the deserved and equivalent devotion to a propaganda that will assist in revolutionizing what was destined by nature to control insect life.

The interested and progressive people of our country are anxious for literature and illustrations on birds. The zeal and intellect of Canadians are not dormant but through modesty and courtesy they have patiently waited Departmental encouragement. I stand to banish the enemies of valuable bird life.

Essex Co., Ont.

FOREST H. CONOVER.

## Fair Representation.

EDITOR "THE FARMER'S ADVOCATE":

In a recent issue of The Farmer's Advocate there appeared an article by Mr. Good, referring to the unsatisfactory method by which the election campaigns are carried on, also suggesting improved methods of obtaining the voice of the people and recommending the grouping of constituencies and using the referendum on questions of vital importance. There is certainly need for an improved method of conducting both Federal and Provincial election campaigns and of obtaining the voice of the people. By the grouping of



Dual-purpose Shorthorn Type.

An English milking Shorthorn showing splendid dual qualities.

constituencies, say three constituencies in one, and by entitling each elector to three votes to either use three candidates, or using three votes for one or more candidates, the minority could elect one representative, thus no large portion of our intelligent citizens need be unrepresented in Parliament term after term. Conservatives would have more representatives in Quebec, and Liberals and Laborites would be better represented in Ontario than by the antiquated method (still in use) of putting two candidates in one constituency against each other with a chance of the one elected having but little qualification as a statesman, except in slandering his opponent and making more good promises than he remembers after he is elected to his lofty position. By the judicious use of the referendum, and the grouping

of constituencies, undesirable candidates would have less chance of being elected. There would be less party strife and animosity, and less temptation to stir up racial and religious prejudices. Harmony between all classes, with every discouragement to selfish interests, is the need of the hour.

Algoma District, Ont.

WM. PIERCE.

## Favors Threshing Gangs.

EDITOR "THE FARMER'S ADVOCATE":

In your issue of February 7, I noticed an item in regard to "Threshing Gangs." While much may be said on this subject both for and against, I think if once tried it would not soon be abolished, but rather than take the whole gang I would suggest just enough men to handle the sheaves while the farmer would handle his own grain and straw. This would mean four extra where three are already employed and that would allow five men to keep the machine fed. These men, being "mow men", could do the work more satisfactorily than could the present system where a new man or two is in the mow each day. When they do not understand each other's method of working, each will in all probability work for his own end rather than all together to get the job done. The writer has frequently seen one man stand next to the feeder for hours at a time, sometimes for half a day, which is tiresome to say the least. Very seldom do we get a gang in the mow where more than two will change off at the heavy end, yet all expect the same remuneration. Now, with the organized gang some system could be adopted so that each man would know what was expected of him and each would work to make it easier for the other fellow by keeping sheaves straight, heads turned the right way, keeping enough sheaves ahead, and not piling them up, etc., thereby making it better for the machine, saving time and trouble, as well as making it easier for themselves. As for pay, I think a cent, or not more than a cent and a half, a bushel would pay the extra men, and as for silo filling I think the same gang could be employed with satisfactory results.

Lambton Co., Ont.

A PRODUCER.

## Maple Syrup Making in Middlesex County.

EDITOR "THE FARMER'S ADVOCATE":

I notice in some of our local papers that the farmer is urged to get busy and make all the maple sugar and syrup possible this coming spring, and, as time is drawing near, it might be a good thing to take stock and see how we are "fixed" for so doing. Some ten or fifteen years ago there occurred in Middlesex County an immense maple syrup boom, originated we believe to a great extent by agents of manufacturers of maple syrup evaporators, and London market on each market day was a site almost wholly occupied by farmer vendors of the maple product, with democrats filled with large and small milk cans of the sweet stuff. But in a very few years the boom burst, and for the past number of years scarcely enough to give each would-be purchaser a taste has been made. Ilderton district by long odds led the rest of the County in the maple syrup industry, and John Haskett, among the largest makers, stayed with the job well. But now these large makers when asked say, "Yes, we will make just a little for our own family use and probably sell a little, if the season is good." One young farmer with nearly 100 acres of bush farm purchased a large evaporating outfit with all necessary utensils, costing \$400 or more, and two years was the limit. Why? Just this—it didn't pay. Syrup was selling at \$1 and \$1.25 per gallon, and in many cases a slow peddling-from-house-to-house sale, and counting the cost of equipment, wood and labor there was nothing in it. So many of the large Ilderton maple orchards are now cleared off and sold for wood and lumber, and most of the syrup made can find a ready sale in the country among farmers who have no bush left, or are too tired or lazy to slave at

syrup making.

Now, there are still left in London and Lobo many good, if not large, maple orchards and we would like to see a great "revival" of the industry this coming spring. According to experts, we always have a good syrup season after a hard winter, and, if this be true, we sure have had the abnormally hard winter.

The need for sweets is great and urgent and it behooves each and everyone of us to "do his bit" in this work. How? A large part of the equipment is still on hand and although some more buckets, etc., would have to be provided, no doubt, it will pay well for the cost, as prices are bound to rule high. For the small bush of 100 to 200 trees an expensive equipment is not necessary. We have seen just as good quality syrup made in

then, w, or e date

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EWB Feb. 25 26 27 28 29 30 Mar. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

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EWB April 27 28 29 30 May 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

the home tinsmith-made galvanized pans as with the patent evaporator. The fundamental thing is cleanliness in all the work, and also to "syrup off" each evening. Saving labor by using horse power whenever possible in hauling the sap, hauling the buckets around while tapping, and going to and fro if the bush is at a distance. If no tank is at hand a barrel can be used satisfactorily on a sleigh or boat.

Get busy, brother farmer, and do not let the season of this rich, sweet and healthful product pass without "doing our bit" to help in increasing the supply of food for the Allies, and, further, there is no doubt whatever but we will be well paid for our work.

Middlesex Co., Ont.

E. T. C.

### Believes Wider Sleighs Practicable

EDITOR "THE FARMER'S ADVOCATE":

Having seen in your issue of Feb. 7th the suggestions offered by "Subscriber" with regard to "Wider Sleighs," we think the idea is a good one. The writer has never understood why the sleigh was made to "track" so much narrower than wheeled rigs. Not only are the suggestions true and worthy of the consideration which "Subscriber" mentions, but consider the advantage in expense if one were able to transfer their

summer vehicle into a winter one by simply taking off the wheels and substituting hub runners. A further advantage worthy of consideration is the elimination of the danger of the team "crowding." Anyone who has used a heavy draft team over country roads deep with snow will realize how it prevents a good team from doing efficient work once they begin to crowd. By all means let us have wider sleighs tracking similar to the width of wheeled vehicles.

P. Q.

R. J. & S.

### Threshing Gangs a Success.

EDITOR "THE FARMER'S ADVOCATE":

In reference to your article on gang threshing, would say it has been done in this corner of Lambton County, Ontario, for quite a number of years and is very satisfactory. The thresher takes a caboose for the men to sleep in and the farmer feeds them. The work was done last fall at four cents per bushel for oats and five cents for wheat. The advantages of this system are these: The farmer can work right up to the time the machine comes to the barn, and start to work as soon as it leaves. It is always at work at seven in the morning. And it will be a sorry day for us if we have to go back to the old way.

Lambton Co., Ont.

A LAMBTON FARMER.

## Food and Plant Food.

BY HENRY G. BELL.

It is a good thing to look facts in the "eye" at times. Why put all the attention on feeding and grooming the team and neglect the greasing of the axles? Why load the tank with "gas" and polish the machine till it shines, and at the same time neglect to oil the bearings? The world needs food; the Allies need food; the armies must have it.

Figures—bushels of them—incomprehensible computations attest the shortage, and give abundant justification for food-saving campaigns. Patriotic citizens are surely heeding the call to save—to deprive themselves of non-essentials—yes, and of some of the essentials to most enjoyable and most palatable food. Brave men, munitions, food and adequate means of transportation are the essentials to victory.

But, are we not studying the mountain top, and neglecting the ledges on which we must step in order to reach the height? Vimy Ridge was won because munitions in abundance were at hand to support the heroism of our gallant troops.

We are crying aloud to save, save, save! Papers are full of, and lecture platforms ring with exhortations to the farmers to grow more and more food—and it is well and proper that such is the expression of the hour.

Now, successful crop production—victorious agriculture depends upon the "main ribs" of good soil and crop management. None can be neglected, and largest and best crops be harvested. They are:

#### Best Crop Production

1. Well-chosen, high-quality seed.
2. Thorough soil tillage.
3. Sufficient soil drainage.
4. Maintenance of organic matter and humus in the soil.
5. Sufficient supply and control of soil moisture.
6. Control of plant diseases and insect pests.
7. Abundance and proper balance of available plant-food.

Other factors could be added, but these are some of the main controlling features.

In Ontario the probability is that we are overlooking the great importance of the last factor at this time.

We have been too prone to dismiss the subject by saying "my soil doesn't need added plant-food." We are fairly protesting that the civilized human family must have more food in 1918, and yet we forget that the more

food that we hope for, depends absolutely upon the supply of that on which the crop feeds—after conditions of plant life have been made suitable by soil preparation, and vigorous seed has been sown.

The soil is Nature's great store-house of plant-food, but Nature in her wisdom does not allow all of the important constituents of plant-food to rest entirely at the disposal of growing crops. In other words, some of the nitrogen, phosphoric acid, and potash is in the form in which the plant uses it, and some is locked up in insoluble or slowly soluble forms for the use of future crops. One of the main reasons for plowing, disking and harrowing is to hasten the letting loose of plant-food which is in the soils in slowly soluble form.

If you are going to buy a new gasoline engine for your farm, it is a fairly good thing to know something about the structure and running of gasoline engines. Similarly, in these days when such tremendous pressure is being brought to bear upon the farmer in order to induce him to grow maximum crops, it is well for him to know something about the food of the crops. There have been not a few occasions when such information would have saved many a loss on the farm, or would have made possible many a better yield of common food crops.

There are three important kinds of food used by the plant. Manure and complete fertilizers carry these three important foods. The first causes straw or stalk growth. It is called nitrogen or ammonia.

The second causes the ripening of grain and the plumping of the kernels. It is called phosphoric acid.

The third gives the plant power to resist disease, and greatly assists in the making of starch in the filling kernel. It is called potash.

Each one of these important foods is necessary if you are to get good crops. If nitrogen is short your grain will be short and poor. If phosphoric acid is lacking, your corn or other crops will not ripen as quickly or thoroughly as they should. If potash is deficient, the grain will be poor, the straw weak, and in all probability there will be much rust and smut in the crop.

Now, the big source of plant-food in Ontario is farm manure. There is surely little need of arguing the value of farm manure before such good farmers as those of this country, yet there are three points about manure that do not seem to be fully understood by some Canadian farmers even yet.

The first is that manure carries all three kinds of plant-food—nitrogen, the plant grower; phosphoric acid, the plant ripener; and potash, the plant strengthener and kernel filler. A ton of well-kept manure carries 10 to 15 lbs. of nitrogen or ammonia, 5 to 8 pounds of phosphoric acid, and 10 to 12 pounds of potash. Over half of this plant-food is in such form that it can easily be lost. In fact, over half the ammonia and potash is in the liquid manure. If manure heaps are left uncovered, over half of the valuable available plant-food is lost by leaching. In a year when all things, including plant-food, are costly, is it not good business to prevent this loss?

If the manure has been hauled out on the land, little plant-food will be lost if the humus or decaying plant matter in the soil has been kept up.

The second point is that manure is the home and food of great quantities of minute life, called bacteria. These bacteria cause the breaking down of the manure, and in so doing bring much of the slowly soluble plant material of the manure into such form that crops can use it. Bacteria grow most rapidly when the weather becomes warm; hence the manure in a soil becomes more valuable as plant-food as the season progresses.

The third important thing about manure is that it carries a relatively large amount of plant grower and plant strengthener, but a comparatively small amount of plant ripener. It is consequently a great plant-food for grass and roots, but does not contain enough plant ripener to bring best results on wheat, oats, barley and other grain crops. This shortage is easily made up by adding 40 to 50 pounds of acid phosphate to the ton of manure when spreading the manure. From a 20-year test, Ohio Experiment Station got a gain of 11½ bushels of corn to the acre, and of 5½ bushels of wheat per acre by supplementing manure (8 tons per acre) with 40 pounds of acid phosphate per ton, or 320 lbs. of acid phosphate per acre.

Many an Ontario farmer has not one-tenth enough manure to apply five or eight tons to the acre. His next recourse is fertilizers. Fertilizers are carriers of the very same kinds of plant-food as is found in manure. They are composed of bone, blood, treated rock carrying phosphoric acid, and various other materials carrying ammonia and potash, so treated as to render the plant-food readily available. They are to the growing crop what whole milk is to the young calf.

Until recently, Ontario farmers have used but little fertilizer. Some farmers from the old land know from experience what fertilizers—or artificials, as they are called in England and Scotland—can do in increasing crop yields.

Canada has suddenly come upon days when the service which fertilizers can render are of great interest for three important reasons:

First—Fertilizers rightly used, greatly increase crop yields.

Professor Zavitz reported last year as follows: "Complete fertilizer with potatoes gave an increase of 37.1 bushels per acre at a cost of 11.4 cents per bushel. Complete fertilizers with winter wheat gave an increase of 5.2 bushels per acre at a cost of 82 cents per bushel, when applied in the autumn, and 8.3 bushels per acre at a cost of 51 cents per bushel, when applied in spring."

Ohio Experiment Station reports a gain of 13.41 bushels of wheat per acre on fertilized land over unfertilized; Indiana, 8.03 bushels per acre gain in wheat from fertilization; and Missouri Agricultural Experiment Station, a gain from 4 to 10 bushels of wheat per acre from fertilization.

An increase of 5 bushels of wheat per acre in Ontario alone would mean a gain of over 4½ million bushels of food for our Allies. Such a gain is quite within the range of possibilities.

Second—Fertilizers improve the quality of the crop harvested. Actual test has shown an increase of over 40% in plump kernels of wheat that was well fertilized over that which was unfertilized.

Third—In these days when farm labor is at a premium, any reasonable device that will render farm labor more productive is of interest. The judicious use of fertilizers is just such a device.

Ohio Experiment Station found, some time ago, that it took approximately 12 hours of labor to produce an acre of wheat. Unfertilized wheat yielded approximately 11 bushels per acre while fertilized wheat yielded over 24 bushels per acre. From the unfertilized grain there was a return of a little over 1 bushel of wheat for each hour of labor expended. On the fertilized wheat there was a return of over 3 bushels per hour of labor expended, or, the labor was rendered twice as productive.

Ontario has by no means reached her limit of production. In fact, her farmers are but playing with the possibilities of Ontario soils. Good soil preparation, good seed and proper manuring and fertilization can greatly increase crop yields. More crops mean more live stock, and more live stock products. One of the big things necessary for largest yields of best quality crops in 1918 is plant-food. This is the year to use manure and fertilizers abundantly.

### Appreciates a Firm Stand.

EDITOR "THE FARMER'S ADVOCATE":

I would not be without "The Farmer's Advocate" and live on the farm. The Christmas Number alone was worth the price of a year's subscription. I like the stand "The Farmer's Advocate" takes on questions of legislation as it affects the farmer. If more of our politicians were to include a few of your planks in their platforms and stand by them, we would have less cause to grumble at our government.

Temiskaming Dist., Ont.

W. R. PETERS.



49½ Bushels Wheat per Acre.

This land had an application of 300 lbs. per acre of fertilizer, analyzing 2% ammonia, 9% phosphoric acid, and 1% potash.

## Automobiles, Farm Machinery and Farm Motors.

### Rear Axles.

About two years ago a man who had been engaged for some time in the purchase of cattle, sheep and hogs for shipping purposes decided that there was money in the automobile business and so he took agency for a well-known make of cars. Being very full of energy it was only a short time until he had read most of the literature about the autos he intended to handle. The question of rear axles did not appeal to him very strongly, however, for when he called on a prospective customer and the man asked him if the rear axle of the car he was selling was full floating type he looked in amazement for a moment and then inquired: "Where do you expect to run this machine, on the land or in the water?" You may laugh at this story but as a matter of fact there are very few motorists who understand much about rear axles because as a general rule they have very little to do with them. Should trouble develop in the differential or in anything relating to the rear wheels, most owners hurry their cars to a garage, leaving all adjustments and repairs to some expert. There is much, however, that one can do towards the care and up-keep of rear axles. Before we go any further it might be well to explain that with full floating rear axles the weight is altogether on the housing of the wheels. These axles can be taken out without the wheels being removed. The three-quarter type of floating axle allows for the weight being carried upon the housing of the wheels but the axles cannot be removed without taking the wheels off. In other words there must be a certain amount of dis-

assembling before it is possible to examine or replace the axles. A straight axle carries all the weight itself and does not depend upon the housing of the wheels. To such axles the wheels are fixed in just the same way as they are attached in the case of buggies. All axles are bound to give a certain amount of trouble but the straight type axles never brought extreme satisfaction because at the points where the weight was carried crystallization would constantly occur and breakages result.

As in other instances it is well with axles to read carefully any instructions that manufacturers give you regarding their maintenance and adjustment. Different kinds of lubricant are called for. Quite a number use a thin brand something similar to 600W but others prefer heavier oil or grease. The 600W derives its name from the fact that the lubricant is tested to stand six hundred degrees of heat. As you will no doubt realize, the wear and tear which a rear axle must stand is not at all trifling. Friction heat at times is terrific and so a lubricant that is lethargic and will not fire easily is an absolute necessity. Dirty rear axles are most often due to the fact that the lubricant leaks. Never fill the housing beyond the level plug and you will seldom find lubricant running from the housing unto the rear wheels. We have constantly advised our readers about draining the oil from the crank case. We wish now to advise that the lubricant be taken from the differential case every five thousand miles. Before putting in any new supply cleanse the case thoroughly by means of kerosene. In most types of axles there are washers of felt at the end of the housing. These prove very effective in

stopping leaks but as soon as they become thoroughly soaked their value disappears. In all types of axles, except the straight style, the wheels should be removed at least once or twice every season and new lubricant put in. Wash out all the old, worn lubricant and cleanse the parts with kerosene. It is folly to put in new lubricant until every particle of the old supply has been removed. When there are grease or oil cups make certain that they are working all the time and, of course, it is well to understand that they cannot work when they are empty.

Should you ever hear a strange sound in the differential do not get the idea into your head that it is going to wear out and right itself. You may have chipped a gear and the more you use the car under such a condition the greater the resulting damage will be. When you are starting the car keep these gears in mind. Every time you jump the machine you put a tremendous force upon these gears and sometimes they are not sufficiently fortified to stand the strain.

In dealing with the rear end of a car it would be folly for us not to mention the universal joints which are so vitally attached to it. Lubrication is very essential in so far as the universal is concerned, because the centrifugal action has a natural tendency to throw out any material that may have been put in to provide easy operation. You had better make it a practice to look over the universal once or twice a month. If it is not working smoothly trouble is bound to develop. Under ordinary circumstances you should have very little difficulty, always provided sufficient lubricant makes operation easy.

## Canada's Young Farmers and Future Leaders.

### A Profitable Half-acre of Potatoes.

EDITOR "THE FARMER'S ADVOCATE":

I am going to give you a little practical experience which I have had during the past year in connection with the Acre Profit Competitions put on by the Department of Agriculture. The one with which I had the good fortune to be connected was the "growing of potatoes for profit competition."

Of late years the potato has risen from the most humble to the most aristocratic of vegetables and as such is commanding much more attention and respect than it has done in the past, and although the farmer is not making such prodigious returns from it as some of our city friends would have us believe, nevertheless, its cultivation can be undertaken with a fair chance of making a pretty tidy margin on one's investment providing one of the farmers' ever present natural enemies such as bugs, blight, drought, wet weather and late, or early frost don't put their feet in it and spoil the game. Most of these drawbacks, however, can be guarded against to a greater or less extent by use of proper methods of prevention and control, while those over which we are unable to exert any influence seem to add the spice of adventure and a sporting chance to farming which makes the profession interesting and keeps us all more or less in the game.

After these few rambling remarks I will now get down to telling you how I grew my half acre of potatoes which was fortunate enough to get the prize for yielding the highest net profit of any in the province which was entered in the acre profit competition.

Early in the spring of 1917, I. F. Metcalf, our District Representative, for the Manitoulin Isd. sent out several pamphlets with the purpose of interesting the farmers in the numerous competitions carried on by the Department. I might state here that the energy which our District Representative displayed in getting these competitions going and keeping them moving after they were on the way is to be very much commended.

The land on which I grew my potatoes is a sort of sandy muck with a sandy subsoil. It had grown a good crop of potatoes the previous year and we intend to grow potatoes on it again this year. I believe that potatoes can be successfully grown for any number of years in the same land providing your potatoes are not subject to scab and the fertility of the soil is kept up by proper application of barn-yard manure.

The land had been farmed for about forty years, and was plowed in the spring all except a narrow ridge of about twelve feet wide. Strange as it may seem to you the potatoes were the poorest crop on this strip and the weeds, especially the poison horse tail, were the harder to keep down. The plowing was down to a depth of about five inches and after the ground had warmed up some the spring-tooth cultivator was run over it. Then in a few days when the weeds began to sprout this operation was repeated.

Four loads of barnyard manure were applied to the previous crop and eight loads to the 1917 crop. No commercial fertilizer was applied—not because I don't believe in commercial fertilizer but because we couldn't obtain any at the time. The varieties of potatoes grown were Irish Cobblers and Ontario Beauties. We had never tested the two varieties under the same conditions, but were under the impression that the Cobblers were the heavier yielders, but as we did not have enough Cobblers we planted quarter of an acre of each variety, the Ontario Beauties having been hill selected the previous year.

The seed was taken from the cellar as soon as it

started to sprout in the spring and spread out on the grass to green and harden up. It would have been better, however, if it had been placed on boards or straw as some of the sprouts sent roots into the ground and I had to handle them pretty carefully to keep from breaking them off. I believe this greening of the seed improved the vitality of the potatoes very much as it holds back the growth until the potatoes are to be planted and does not let them waste their vitality in growing sprouts which get broken off.

The seed was not treated for scab as there was none on it and we are rarely troubled much with scab except when we plant on heavy land. The seed was cut by hand, two eyes were left in a cutting, and the cuttings would weigh about two ozs. each.

On June 11 planting was begun. I would have preferred to have had them in before this but the ground was rather damp as we had a very wet spring.

The plank leveller was now brought into commission. We put a tongue on it, then turned it upside down and nailed two by four scantling along the bottom twenty-eight inches apart. Then we rode on the leveller and it served the double purpose of breaking down the lumps and leaving little ruts about two inches deep in which to plant the cuttings. These we planted about ten inches apart in the row and covered them up with the hoe. The young plants were up in an almost incredibly short time and the weeds along with them.

As soon as the rows could be plainly seen the one-horse cultivator was run through them having first taken off the side shears. This threw the earth fairly well up to the young plants. A few days later they were gone through with the hoe and any weeds that were left were cut out. In a few days they were gone through again with the scuffler and earth thrown up to them a little more.

The "bugs" began to appear very plentiful now. Some of these we knocked into a can with some coal oil in it which prevented them from crawling out and also made them easy to burn. This method is altogether too slow and one imagines after he has been at the job for a while that all his neighbors bugs must have come over for a visit. After I got tired picking off the "hard shells" and as soon as the young "bugs" began to hatch I started to apply Paris Green. I don't claim to know much about spraying, but I favor putting on the poison strong enough so you feel sure you won't have to do it the second time. I put two heaped teaspoonfuls of Paris Green in part of a cup of water, mixed it well, then strained into a five-gallon sprayer. I believe this is about the right strength as it killed nearly all the "bugs" and did not injure the foliage of the plants. All that were left were destroyed about a week later. It was not necessary to go over the entire crop this time as they were only numerous in small sections of the patch. I did not spray with Bordeaux as I hadn't time and we are very rarely troubled with blight anyway. I believe I would have felt a good deal safer though if I had sprayed and probably the extra peace of mind would have been an adequate compensation for the extra labor that it would have taken to apply the Bordeaux.

The tops of Ontario Beauties were now getting so large that it was with some difficulty that I got through again with the scuffler. This time the earth was thrown well up to the plants.

About the middle of September we had a severe frost which injured part of the patch pretty severely. I thought the game was up then, but I guess we were all in the same box and the other fellows' patches must have been frozen just as badly as mine.

The District Representative came around about

October 1 to weigh the crop. It was then we got our surprise as we expected to see the Cobblers turn out the greatest yield. The first square rod we measured off we took in the middle of patch so we would get a half square rod each of the Irish Cobblers and the Ontario Beauties. To our surprise the Cobblers only weighed 90 lbs. and the Beauties 127 lbs. This figures out to something like 640 bushels of Ontario Beauties per acre. I do not remember the exact number of pounds that each of these varieties yielded on the second square rod we weighed but the result was very similar to the first.

The Ontario Beauty is a mid-season potato, very much like the Empire State in appearance, shallow-eyed, white, mealy and of excellent quality. It has turned out better for us than any other variety of potato we have tried. We have hill-selected all our seed of this variety for next year so we will have it absolutely pure. Nine pounds of marketable potatoes of this variety were obtained from one plant this year.

I have given you a more or less detailed account of our methods of potato growing but before closing I will give you a brief summary of the cost of production and the net return.

#### Cost of Production on One-Half Acre.

Rent of land.....	\$ 5.00
Plowing.....	2.00
Seed 15 bus. at \$2.75 per bus. (Gov. price).....	41.25
Manure 8 tons at 50c.....	4.00
Manure, 4 tons at 30c.....	1.20
Spraying mixture 35c.....	.35
Man's labor at 15. per hour.....	10.95
Horse labor at 10c.....	.45

Total cost of production.....\$65.20

#### Yield and Profit.

Yield of marketable potatoes on 1/2 acre, 231 bushels	
Valued at 90c. per bushel (Gov. price).....	\$208.50
Total cost production.....	65.20

Net profit on 1/2 acre.....	\$143.30
Net profit on 1 acre.....	\$286.60

Just a few remarks in closing regarding the Short Course at the O. A. C. which it has been my privilege to attend. It would be quite impossible to speak too highly of these Short Courses. They give one a great deal of practical and scientific education in any particular line of agriculture to make a specialty. They also afford a very profitable diversity in the routine of farm activities and send one back to the land with more enthusiasm and with a determination that he will once more try and do his bit.

It would be quite incomplete to close without a word with regard to kindness and consideration shown us by the faculty of the college. All the professors always treated our most ignorant questions with the utmost patience and respect.

Algoma District, Ont. JOSEPH HODGSON.

I must, while I am writing, congratulate you on the good work which your paper is doing and also on the development of the paper itself. I have used your "answer" department myself several times and have gotten good satisfaction from same each time and also from answers intended for others, as one cannot always think of all one wants to know but others do for you. Your Christmas Number was a "howling success" and I still see it lying on a table open where someone has been reading it.

N. B. G. E. FLEWELLING.

## THE DAIRY.

Majestic Rag Apple, a son of Rag Apple Korndyke 8th, was recently sold at Syracuse for \$35,000. This is an exceptionally high price for a calf.

Duchess Skylark Ormsby, a Holstein cow with the world's record of 1,506 pounds of butter, died recently. At the time of her death she was about eight years old.

Tilly Alcartra, a Holstein cow which became renowned some time ago for her high production, has recently made a record of 40.56 pounds of butter and 729.1 pounds of milk in seven days. In five years this cow has produced 123,351 pounds of milk, and 4,856.5 pounds of butter. At the time of her last freshening she was over nine years of age.

Twenty-two Ayrshire cows and heifers qualified in the R. O. P. test from January 4 to February 7. Queen of Springbank was the only mature cow qualifying; she gave 8,581 pounds of 3.61 per cent. milk. White Lady of Craigielea 2nd was first in the four-year-old class with a milk record of 11,262 pounds, making 465 pounds of fat. In a class of seven three-year-olds, Lenore 2nd. was first. She gave 11,302 pounds of milk, which tested 4.38 per cent. There were a large number of two-year-olds qualifying, and the winner, McGregor's Laurie May, made an exceptionally good showing. Her record is 13,060 pounds of milk and 503 pounds of fat.

### The B. C. Dairymen's Convention.

The largest, the most enthusiastic and the most constructive convention in the history of the Dairymen's Association in British Columbia, is the record to be duly written across the face of the programme of the meeting held February 6 and 7 at Chilliwack. Nearly two hundred farmers from all over the Province attended the sessions. Many of them had to leave the care of their cattle and farm affairs to their wives and children in order to attend, but they came and they came to do business. The City Hall was not large enough to comfortably house the assemblies.

The program was full—too full perhaps to get all the important business done. The President, S. H. Shannon, in his brief opening address called attention with pride to the excellent Record of Performance work which the past year has witnessed in the Province. Last year Grandview Rose took premier place amongst the Ayrshires; Zarilda Clothilde De Kol, for Colony Farm, has broken all Holstein strictly official records for yearly milk production. One Jersey herd in the Province this year has broken two Canadian class records and crowded two others very closely. Such work, combined with the tuberculosis testing and the careful selection of the new sires, is fast placing British Columbia breeders in the front as aggressive, constructive workmen.

Conspicuous in the programme was the address of Professor P. A. Boving, of the College of Agriculture, University of British Columbia, upon "Soils, Their Origin and Treatment." The absolute sanity and economy of saving liquid and solid manure and of growing alfalfa, clovers, peas and vetches was set forth in such a way that manure pits, manure sheds and leguminous crops will certainly become as prominent as silos with British Columbia dairymen.

Co-operation is a realization in British Columbia. State Food and Dairy Inspector Mickles, from Portland, Oregon, opened the discussion of this subject in an inspiring and conclusive way. J. W. Berry told the story of why the Fraser Valley Milk Producers' Association had to be, what it is doing and accomplishing, and toward what its future plans lead. This Association has paid 95 per cent of the farmers in the lower Fraser Valley regularly and more for their milk than they had previously received, and has accumulated a surplus of many thousands of dollars.

The increased Pork Production Campaign, which is being waged by the Department of Agriculture, through its Live Stock Commissioner W. T. McDonald and his special assistant G. S. Harris, was put to the dairymen fairly and drew from them the fullest expression of co-operation and support.

Dr. Sills, from Oregon, gave a most clear, interesting and helpful discussion on "Sterility and Contagious Abortion." Dr. A. J. Damman, of Vancouver, presented the handling of tuberculosis in a thorough and instructive manner. Every dairyman present appreciated the clearness and helpfulness of these men of the veterinary profession.

Several resolutions of extreme importance were presented and drew much discussion. A resolution was passed instructing the executive committee to execute plans whereby all worthy heifer calves be saved from slaughter and made available for distribution in the newer sections. Remembering the high standard of cows and sires in the Province, the shortage of dairy products and the needs of our newer sections, if such action will save about one thousand heifers each year it will do much to increase dairying in British Columbia.

Another resolution was passed instructing the executive to work out and endeavor to obtain a reserve or insurance fund to cover the losses arising from tuberculosis testing. The present system of tuberculosis testing was endorsed and the Live Stock Commissioner urged to increase his staff so as to more completely and thoroughly follow up the work.

An important step was taken when the Jersey breeders, to the number of twenty, met, adopted a constitution and elected officers for a Jersey Breeders' Club for

British Columbia. Their purpose is to do everything to advance Jerseys in the Province. A similar club was organized by the Ayrshire breeders. There is a great field for these clubs, and they should do much to advance the breeding of good dairy cattle.

For the ensuing year S. H. Shannon was re-elected President; J. W. Berry, Vice-President; T. A. F. Wiancko, Secretary, and P. H. Moore and Mr. Steves members from the Board of Directors on the Executive Committee.

### Unity of all Dairy Interests Needed.

EDITOR "THE FARMER'S ADVOCATE":

I have read with much interest your forceful editorial advocating a Dominion Dairy Council, and I heartily approve of the suggestion. There is great need of coordinating the various branches of the great dairy industry of Canada. Jealousy and lack of co-operation are more common than is good for proper development of the greatest and most important branch of agriculture. It is also unwise to assume that all the dairy wisdom of Canada is to be found on any one man's shoulders, nor yet in any one group of men representing but one phase of dairying. A wise combination of milk producers, milk dealers, cheese and butter manufacturers and dealers, manufacturers of condensed and powder milks, and ice-cream, together with a fair representation of professional dairymen, but not enough to make the organization top heavy with non-producers, would seem to be the ideal. These could then bring to the Provincial and Dominion Departments of Agriculture, the combined wisdom of all branches of dairying in matters of legislation, and could co-operate for all other legitimate purposes where united action is likely to be of great value in forwarding the interests of Canadian Dairymen.

Allow me to suggest as a first step, that the various provinces become organized and from these could be selected timber for building a Dominion-wide organization. I may mention that steps have already been taken to form such for the Province of Ontario at a conference to be held at the Ontario Agricultural College, Guelph, April 4 and 5, 1918. We sincerely hope that all branches of the dairy industry of Ontario will be represented at this conference. Speakers are being arranged for, from all classes of dairymen, and time is to be allowed for a full discussion. It is expected that the Hon. Minister of Agriculture for the Dominion will be present to meet representative men, who will have an opportunity to lay their views before the man selected to look after the interests of farmers in the Federal Cabinet, from whom so much is expected in this new era for Canada.

O. A. C., Guelph, Ont.

H. H. DEAN.

### American Ayrshire Breeders' Meeting.

The annual meeting of the American Ayrshire Breeders' Association was held at New York, January 31. W. F. Stephen, of Huntingdon, and R. R. Ness, of Howick, Quebec, represented the Canadian Association. It appears that there was a movement on foot to raise the registration fees on imported Ayrshires, including Canadian stock, to \$25 for females and \$50 on bulls. The Canadian representatives in the interests of Canadian Ayrshire breeders, worked hard against the motion. After heated discussion the meeting decided to make no changes in the fees for the present. The President is W. P. Schank, Avon, N.Y.; Vice-President, Hugh Chisholm, Port Chester, N.Y.; C. M. Winslow was re-elected Secretary. W. F. Stephen is the Canadian representative on the board.

## POULTRY.

### Poultry Feeding.

EDITOR "THE FARMER'S ADVOCATE":

There is as much in the feed as in the breed, probably more. To secure the best results you must feed the right amount of food of the right kind and at the proper time. You must watch very closely the appetites of the birds so that you can properly cater to them. What would be right for one flock might be wrong for another. Fowls in a wild state live on seeds, green grass, bugs, worms, etc., so in order for us to get the best results from our birds in the winter we must supply them with these articles in some form or other. Of course, in the summer, birds having free range can get this feed for themselves.

Just before it is matured is about the most hungry period in a bird's life. It can eat more than at any other time, and if it is not given all it wants then probably more harm is done than can ever be repaired.

If you take the trouble of examining the crops of the fowls at night when they are on the roost it can be determined whether they are being fed sufficient food or not. If their crops are hard too much is being fed while if nearly empty not enough is being given.

The grain in the crop should fill it comfortably full the skin not being tight but rather loose. The healthy hen is a hearty eater. The good layer will be found scratching around at night for some stray bit of food after the poor layer is on the roost, and again in the morning she will be first off the perch working and singing around.

The person who studies the appetites of his flock and feeds accordingly, generally puts his feed to the best advantage. It is best to have the fowls partially hungry all day till night. This will naturally induce them to scratch hoping to find more feed. As scratching is the

best exercise hens can get, have the floor of their house covered with about six inches of dry straw and any time you happen to be in the poultry house it is a good plan to rake all this straw into a heap in the middle of the floor as they will at once start to pull it down, thereby giving them still more exercise. It is well to examine this litter every day to see if any grain is being left, and if there is feed a little less. To be always changing their bill of fare does more harm than good. Have one system of feeding, but let that system contain as much variety as you possibly can.

To feed properly conditions must be studied. The amount and quality of food that would keep a Wyandotte in good condition might overfatten a Rock. Overfeeding is not good feeding, as it is what a fowl is able to digest and assimilate and not what she eats that makes eggs and flesh. The hen needs a balanced ration and regular feeding not a large amount of feed one day and a little the next.

If the birds are laying well with the present feed it is a mistake to make a change. There can be no set rules for feeding. A fowl, on an average, will eat about one-half handful of grain in the morning and about one handful at night. For the noon feed a mixture of ground grains, bran and beef scrap may be fed from hoppers, opening them at noon and leaving open for a couple of hours. Like human beings fowls like a variety. One of the best feeds is wheat, but it is not good to feed any one kind of grain alone. Mix all the different kinds of grain together with a liberal supply of corn at night in the winter.

Some fowls can exist and be profitable on a great deal less feed than would be needed for others, so when this is noticed in a flock it is advisable to cut down their allowance to meet the demand. As a general rule more fowls are overfed than underfed, especially where small flocks are kept. While overfeeding has its bad effects, underfeeding is just as bad. An underfed bird may receive sufficient food to sustain the body but there is a lack of food for egg making. The first food a fowl eats goes to build up its body and the remainder to the making of eggs or fat, according to the quality of food given.

Charcoal, oyster shell and grit should be kept in hoppers before the fowls all the time and in winter green food in some form such as sprouted oats, steamed clover or mangels should be fed. Hang the mangels split in two pieces on the wall by putting a nail through them, while you may feed the clover with some ground grains as a wet mash once in a while.

So much has been said regarding feeding and foods but there are some other things necessary to get a good supply of eggs. See that your birds are not covered with lice as lousy hens will not lay well. If they are, dust them with some good insect powder. Also have a good-sized box in the poultry house filled with road dust or ashes for the birds to dust themselves in, you may also put some insect powder in this. Examine your building also for lice, especially the roosts and if any are found give the inside a good spraying with some good lice liquid.

Always have a liberal supply of good clean water before the birds and in winter time warm it for them. Water is very necessary as the egg is made up of a large percentage of water. Once every week it is a good idea to scald out their drinking vessels.

In very cold weather, if the mixed grain for the evening feed is browned in the oven and fed warm it is relished very much by the birds. Some corn on the cob fed warm is also very much liked by them and should be fed at night. One might also feed some grain in the sheaf also as this will make them hustle around threshing it and so they get still more exercise.

One other very important thing in feeding poultry is to be as quiet as possible in the poultry house, not causing any alarm amongst the birds. Have them so you can go amongst them without their being scared of you and flying away from you every time you go to them. Ilderton.

W. A. S.

### Selecting Poultry for Vigor.

EDITOR "THE FARMER'S ADVOCATE":

Constitutional vigor is largely responsible for success in poultry keeping. Many birds are kept for breeding purposes which are lacking in this very essential quality. Constitutional vigor in fowls is often impaired in flocks by artificial means employed in hatching and rearing, not being able to hatch and rear normal chicks. We cannot get ahead of nature—the old hen knows the art much better than the manufacturers of incubators and brooders do. While a lot of experimental work has been done to find out why an incubator cannot do the work as well as a good sitting hen, they have not to date quite solved the problem satisfactorily. Through investigation they have proved to us that thorough disinfection, moisture and fresh air play an important part, and yet we find something still lacking to always get a normal chick hatched. The first ten or twelve days of incubation seems to be the critical time. Of recent years I have been working a combination between the hen and the incubator, which has given me good results. I aim to have eight or ten hens set at one time, reserving my root cellar for the purpose, and placing orange boxes or other suitable boxes of the right size, or just large enough for one hen to fill; if too big, often two hens will want to occupy the same nest and so cause trouble. Feed, water and a dust bath are put within reach and after the hens are quieted down on a few stale eggs put in each nest, this may take a day or so, they are set with thirteen or fifteen eggs each, depending on the size of the hens and season of the year. When these eggs have been under the hens for about eleven days, I remove them at night, test them, and place them in the

incubated eggs. I every egg on or laid is off an back to in the in for the thirty-th I am ab their vig

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incubator to finish, re-setting the hens again with fresh eggs. I find the machine, if properly run, able to hatch every egg that the hen would, and it does not tramp on or kill any, as hens sometimes do. After the hatch is off and the chicks are strong, I remove them at night back to the hens and put the eggs from the hens again in the incubator, or if I use the brooder I re-set the hens for the third time. I find that most hens will sit for thirty-three days, if properly cared for. By this means I am able to get normal-hatched chicks which keep up their vigor.

In the selection of breeding stock, constitution should be of prime importance, more especially in the selection of a male bird, as he will represent in breeding a large proportion of your flock. He should be a bird possessing very strong constitutional vigor and of good type. The vigor is largely determined in the heads by selecting birds with good broad heads, short, stout, broad bills, and full, bright eyes. These possess, as a rule, strong vigor. Birds with long heads, long bills, and a sunken appearance of the eye, should always be discarded as breeders, as they invariably lack that strong constitution which is so important. Far too many people select breeders by the appearance of their plumage and forget constitution. The male bird should possess a masculine appearance. If he be of the general-purpose breeds, he should be of good beef type; broad across the shoulder, with a good, broad back and a deep, full breast; medium short on leg and legs set wide apart. Poultry of this conformation make better use of their feed and put on flesh more rapidly. Environment and feed also play an important part. Stock that is reared on free range as a rule possess more vitality than those that are reared in close confinement. Growing stock require a large amount of green feed, as well as animal feed. When they have free range they usually pick enough grass and other green stuff and also get a quantity of bugs, insects and worms, and with a liberal ration of grains will make rapid growth. Feeding a soft, wet mash once a day will greatly assist in rapid growth. A good mash is one composed of shorts and sour milk, mixed. Where sour milk or buttermilk is available, there is nothing better for growing chickens. Crushed oats are an excellent feed for young stock, and can be used almost from the start. Clean wheat screenings will be found an excellent growing feed also. Do not starve your young stock if you expect good results. Brant Co., Ont. J. W. CLARK.

## HORTICULTURE.

### The Ontario Vegetable Growers' Convention.

Friday, February 15, saw a representative number of Ontario vegetable growers assembled in the annual convention of the association in Toronto. Three sessions were held on that day and much useful information was imparted by the speakers. Many good ideas, also, came out in the discussion. The importance of vegetable growing to the country was clearly stated by the President, J. J. Davis, London, in his address. It was intimated that some agitation was on foot to close greenhouses claiming that the greenhouse crop was a luxury. Concerning this he said:

"I am unable to define what a luxury is, and I have not yet met anyone who can. It seems to be a matter of opinion and of means, for instance, to a man with a large family and an income of ten or twelve dollars a week, I suppose greenhouse lettuce is a luxury, but to a man with no family and the same income it is not. However, there is a feeling in some quarters that greenhouses should be closed during war time, because their products are luxuries. Now suppose we define luxuries to mean any and everything that we could squeeze along without during the war, and see where that would lead us. We should have to include greenhouse products and several of the outdoor vegetables, all fruits, domestic and foreign, all products of biscuit factories, cereal factories, candies, tea, coffee, chocolate, cocoa, all musical instruments, jewellery and a host of other things (as the auctioneer says) which are too numerous to mention, and the result would be that instead of being the red blooded people which our boys at the front have shown us to be, we would be a nation of dyspeptics and anaemics. Besides that we should have an army of men, women, girls and boys thrown out of employment, and who could not be absorbed by other industries because other industries would become partially crippled through the loss of business involved in the shut down.

However, we are most greatly concerned about our own business, and I am going to present a few reasons why our business should be kept going. In the first place greenhouse vegetables have a dietetic value out of all proportion to their cost. This can be proved by the daily newspaper, because some of the papers feature a health column presided over by a medical man and if you read that column, you will be surprised at the frequency with which fresh vegetables are advised by the doctor in comparison with drugs. Another very important phase of greenhouses is that they enable us to keep our help the whole year round. If we were to close our greenhouses, we must of necessity let our help go in the fall and there is no alternative for them but to seek winter employment in the cities and thus many a good man would be lost to the land forever.

Another important side of the question is that we are not producing nearly all the fresh vegetables which are being consumed in our country, and it is a fact that thousands of dollars are being sent out of our country to purchase the same class of produce, and surely this

importation should stop before Canadian industries are closed.

The greenhouse bears an important relation to outdoor crops in that those crops are very materially advanced by the plants being grown in them until warm weather comes."

The Secretary, J. Lockie Wilson, referred to the scarcity of coal which had curtailed greenhouse operations to some extent but, said he, notwithstanding these drawbacks and the fact that thousands of vacant lot gardens were utilized by the urban population the vegetable growers have had a reasonably good season. The crop competitions were continued in 1917 and the ones selected were: early potatoes, tomatoes, celery and onion.

Owing to war conditions the Executive Committee decided that it would not be good policy to increase the number of branches of the Association. In the competition for increased membership the following branches were prize-winners: First, Stratford; second, Clinton and Louth; third, London.

Mr. Wilson made reference to the scarcity of seed and the efforts being put forth by the Federal and Provincial Governments to relieve the shortage.

#### Insecticides and Fungicides.

The convention listened to an instructive address from Prof. L. Caesar, O. A. C., Guelph, on Insecticides and Fungicides. The properties of different materials were outlined, their varying strengths were defined and the probable prices of each mentioned. The prices will be the same as suggested in Prof. Caesar's remarks to the Fruit Growers Association a report of which will be found in last week's issue. Where the recommendations made to both the fruit growers and vegetable growers were the same we shall not repeat them here, but we refer readers to the report of the fruit growers' association.

In regard to some arsenicals we quote Prof. Caesar's words to the vegetable growers.

"Arsenate of lead is not nearly so quick killing or so strong a poison as Paris green, partly because it does not contain nearly so high a percentage of arsenious acid. The paste form is about 14 per cent. of this and the powder about 30 per cent. so that it requires nearly four pounds of arsenate of lead paste or about two pounds of the powder to equal one pound of Paris green.

"Arsenate of lead, however, has two great advantages over Paris green, namely that it is a much safer poison, being in fact the safest poison we have either when dusted or sprayed on plants, and that it adheres to foliage in wet weather much better than Paris green. It adheres also better than any other poison known. About two pounds of arsenate of lead paste or one pound of the powder added to one pound of Paris green makes an excellent combination for destroying potato beetles.

"Arsenate of lime, also called arsenate of calcium or calcium arsenate, is a comparatively new poison commercially, but will likely be much used this year. It is sold both as a paste and a powder but chiefly as a powder. It is white and looks very like arsenate of lead. Pound for pound it is about one-fifth stronger in arsenious acid than arsenate of lead, the paste containing about 17½ per cent. arsenious acid on an average and the powder about 35 per cent. It is also cheaper than arsenate of lead. As a rule the powder will be more convenient to use and as in the case of arsenate of lead is much more satisfactory to store and to ship. Though arsenate of lime adheres to the foliage better than Paris green, it does not adhere so well as arsenate of lead. About 1½ pounds of the powder should be nearly equal to one pound of Paris green, though it will not kill quite so quickly as the Paris green will. Arsenate of lime is quite safe to use with Bordeaux mixture, but if it is used with water alone there should be added about six pounds of freshly slaked stone lime or eight pounds of hydrated lime to every 40 gallons of water to prevent burning. The hydrated lime of course must have been kept in paper bags or protected from the air, otherwise it loses its strength.

"In the state of Maine sodium arsenate and also sodium arsenite, often sold under special popular names, are much used as poisons on potatoes. The State of Maine as you know is a great potato growing state, one of the greatest across the border. Their reason for using these substances is that they are very much cheaper than either Paris green, arsenate of lead or arsenate of lime and are about twice as strong even as Paris green. They cannot of course be used alone or even with lime on foliage, but are quite safe with Bordeaux mixture, and Bordeaux mixture should always if possible be used on potatoes because of its invigorating effect and because of its power to ward off disease.

"These poisons when purchased are in the form of a powder and are dissolved with boiling water. Sodium arsenite can be made at home quite simply, but only the liquid form. The method is to boil together one pound of white arsenic and one pound of sal soda in one gallon of water with stirring until all the arsenic is dissolved. This usually takes about ten or fifteen minutes. Then any water that has evaporated may be made up for by adding more. This gallon of poison will now contain practically twice as much arsenious acid as would be found in one pound of Paris green so that where one pound of Paris green would be used half a gallon of this would act as a substitute. I may mention again that it is not at all safe except with Bordeaux mixture.

"Nicotine sulphate 40 per cent. both under this name and under the name of Black Leaf 40 can be purchased this year at about the same price as usual, namely \$2.50 per two-pound can. The directions for use are given on the can. This substitute should never be left exposed to the air because it volatilizes. Tobacco extract is of course one of the best and safest remedies for plant lice

on any tender or moderately tender foliage where soap washes would be dangerous." As fungicides, blue-stone, lime sulphur and formalin were mentioned.

#### A Survey of Ontario Vegetable Growing.

Last season F. F. Reeves of Humber Bay, was asked to make a survey of the vegetable growing industry in Ontario that the Provincial Government might have first-hand information on which to base their policy in regard to the placing of war veterans on the land. The survey was not completed but Mr. Reeves gave a summary of the investigation and of the impressions gained by him while executing his orders. In the first place it was found that growers were altogether ignorant in regard to the cost of production of different crops and if some system of expense accounts were used Mr. Reeves was sure that the unprofitable crops would be dropped and the more remunerative ones extended. The speaker, in the second place, said he was convinced that certain sections of the province were adapted to the growing of one or two special crops and that growers in those districts should specialize. In this way they would make a name for their community and establish themselves in the trade so as to command a higher price for the product they had to sell. Such a system would also effect a great saving in labor, equipment and material. Another conclusion arrived at was that growers are not taking the advantage of the assistance rendered by the colleges and the Department of Agriculture. In many cases growers were surprised to learn that certain diseases and insect pests which had incurred severe losses could be, and were being controlled in other parts of the Province. Mr. Reeves regretted that all growers of vegetables were not awake to the means whereby this information might be obtained.

#### Experiments in Vegetable Growing at Vineland.

Some interesting results from experimental work at the Vineland Experimental Station were enumerated by O. J. Robb who is in charge of that department at the Station.

Irrigation tests on asparagus gave an increased yield of 840 lbs. per acre. The test plot was four years from planting and gave a yield of 2,652 lbs. per acre or an average yield of .4 lbs. per plant. The yield would have been larger if cuttings had been made later in the season. The highest yielding varieties were: Columbian White with .56 lbs. per plant; Dreyer's Eclipse with .4 lbs. per plant and Barr's Mammoth with .31 lbs. per plant.

Northern-grown potatoes for seed have given excellent results in tests at Vineland. Results in 1917 gave an average increased yield of 60 bushels per acre in favor of Northern seed. The 1916 results gave a gain of 91 bushels per acre in favor of Northern seed. The two years work led Mr. Robb to believe that much heavier yields could be obtained from Northern seed under average conditions and the crop could be lifted nearly 10 days earlier. Hill selection work with potatoes has been carried on since 1915 and the results were reported in detail. Selection work in peas covering a period of three years has shown very satisfactory results. The characters selected for were, the largest number of pods per vine and greatest degree of uniformity in maturing. Following is the amount of increased pod production figured on the percentage basis: Champion of England, 126 per cent.; Telephone, 100 per cent.; Abundance, 90 per cent.; McLean's Little Gem, 62 per cent.; Gradus, 50 per cent.; Thomas Laxton, 48 per cent.; Alaska, 31 per cent.; Hortford's Market, 22 per cent. decrease. Tomatoes are another crop experimented with, the yield of which has been materially increased. Seed production at Vineland is a feature of the work and samples are sent to growers who desire to test them out.

#### Shipping Tomatoes.

The co-operative movement in the Leamington District was reviewed by W. R. Dewar, manager of the Erie Co-operative Company, which markets the product for approximately 100 growers in that section. The practice is to produce for long shipments as the local markets cannot absorb the production. With a large amount of glass in use they are able to ship tomatoes practically the year round. A 20-lb. box is used by the association but Mr. Dewar explained that the 11-quart basket has many advantages and the trade is quite partial to it. The association has no central pack but much of the packing is done under the supervision of a company inspector who goes about amongst the growers while the work is in progress. In this way a uniform pack is procured. The company only retains 10 per cent. of the actual sales to cover expenses, and at the end of the year any surplus is distributed pro rata. No charge is made on shipments sold through commission houses. Mr. Dewar outlined the various stages in the development of the industry in the Leamington District, and described the advantages of the co-operative method as it worked out with them. By working together they are able to keep in touch with the markets from Halifax to Saskatoon and distribute their product according to the strength of the demand in the different centres. Working co-operatively the growers are able to extend their market; they can make more f. o. b. sales and on the whole distribute their product to much better advantage than they could acting independently.

#### Other Addresses.

Geo. Rush, Humber Bay, spoke in regard to the need of more co-operation in market gardening. The growers, he said, are not organized but they must sell to buyers on the market who are more or less organized and know pretty well what the demand is.

J. J. Davis described two practices which he had

found useful in greenhouse work, particularly in regard to growing tomatoes. One was the fertilization of the first bloom on the tomato plants in order to get them to set fruit. A spoon is used to collect pollen and the end of the blossom is dipped into this so the pollen will come in contact with the end of the pistil. The other suggestion was that the burning of sulphur in the greenhouse will control the "leaf spot" or "black spot" of tomatoes. The sulphur must be actually burned and only in small quantities, but never when the leaves of the plants are wet. He recommended an old shovel for this work on which a few live coals are placed. The operator should sift a little sulphur on the coals as he walks along and should not allow too much gas to assemble in one place.

The growing and marketing of potatoes was treated in a practical way by Douglas Maynard, Leamington; V. Robinet, Tecumseh, outlined his method of producing melons and Chas. Syer, Bartonville, gave some useful hints on the growing of cauliflower.

The report of the Vegetable Specialist, S. C. Johnson, was similar to that of last year. Many of the results of experiments were negative in character. G. B. Hellerman, Waterford, spoke on "The Uplift of American Vegetable Growers' Conventions and W. T. Macoun, Dominion Horticulturist, reviewed some of the benefits of garden competitions. L. G. Schermerhorn, New Brunswick, N. J., gave an illustrated address on the Cold Frame industry of New Jersey and their double-cropping methods. The Convention was also favored with an address from W. B. Roadhouse, Deputy Minister of Agriculture.

#### Officers.

The following officers were elected for 1918: President, J. J. Davis, London; First Vice-President, E. K. Purdy, Catarqui; Second Vice-President, M. May, Tecumseh; Secretary-Treasurer and Editor, J. Lockie Wilson, Toronto. The Executive will consist of J. J. Davis, London; E. K. Purdy, Catarqui; Maurice May, Tecumseh; J. Lockie Wilson, Toronto; F. F. Reeves, Humber Bay; Thos. Delworth, Weston.

In two resolutions the convention protested against any curtailment of the industry and called on the Government to remove the duty on commercial fertilizers.

#### The Apple Situation.

Several growers, at the recent Fruit Growers' Convention at Toronto, were called upon to discuss the apple situation and the outlook for 1918. J. G. Anderson, Lucknow, through a communication to the Convention, advised the adoption more generally of the box method of packing in order to meet the situation. Elmer Lick, Oshawa, was none too optimistic, especially if a large crop should result. In any case, however, he declared that the good product would sell. H. T. Foster, Burlington, was of the opinion that a market could be found for good apples well put up, but labor will be even shorter than usual and many orchards will be neglected. The President, F. A. J. Sheppard, said that the tendency was for the poor apples on the market to pull down the price of the good ones. Dr. A. J. Grant, Thedford, remarked that the same spirit of pessimism prevailed in 1916, but those who had good apples sold them well. His desire was that they have a good crop, and he felt sure a market could be found. The public must be taught to substitute and conserve the transportable foods. This would create a great demand for apples. Mr. Onslow, Niagara-on-the-Lake, suggested that the Government take steps to provide for the evaporation of second-class stuff. Mr. Gilbertson, President of the Norfolk Fruit Growers' Association, told the Convention that their Association produced only about 2,000 barrels last year, and the manager had almost as much trouble to get rid of them as he usually experienced when he had fifty or sixty thousand barrels to dispose of. Interest, he said, was on the wane in his district, and had been for two or three years.

F. C. Hart, Director of the Co-operation and Markets Branch of the Ontario Department of Agriculture, recommended that the co-operative associations be maintained to assist in the disposal of the product and to help retain the market which the fruit growers of Ontario had built up. The shipping of number threes to the West in 1918 was discouraged, especially in the raw state. Mr. Hart said that it was a problem that the Association and the Food Controller should look into, namely, that of converting the low-grade fruit into apple butter, jam or evaporated product. Low-grade apples would tend to keep down the price of good ones and should be processed in some way.

#### The National Service Girls.

An important part of the recent Ontario Fruit Growers' Convention program at Toronto was the discussion regarding labor, particularly as it concerned the employment of the National Service Girls.

Last season the fruit growers throughout Ontario received considerable assistance from young women and girls recruited by the Trades and Labor Branch, Toronto. Generally this help was appreciated, and much assistance was rendered by them. However, the young ladies who were out last season and intend to go out again to help in 1918 felt that the remuneration was not adequate, and at a meeting which they held recently they decided that it was not unfair to ask for some stipulation in regard to pay and for a higher minimum wage. A committee of the growers had been negotiating with a committee representing the National Service Girls, but not until the Convention was nearly over did they reach an agreement satisfactory to both parties. Miss Harvey, of the Trades and Labor Branch, explained

the whole matter and said that she could not recruit the girls without a satisfactory guarantee. The growers finally agreed to guarantee \$6 per week during the early part of the season, and \$9 per week for the harvest of such fruits as apples, pears, plums, etc. The dates when this change shall become effective will be decided by representatives of both interests. The Niagara growers furthermore agreed to pay the following piece rates for picking: Strawberries, 2 cents per box; raspberries, 3 cents per box; blackberries, 2 cents per box; cherries, 20 cents per 11-quart basket; black currants, 40 cents per 11-quart basket. Miss Harvey opined that these prices would be considered by the girls, and she thought she would be able to recruit a good number on such terms. Secretaries will be established in the various districts who will arbitrate matters between growers and pickers. All girls who do not "make good" will be returned to their homes.

Dr. W. A. Riddell, Superintendent of the Labor Branch, told the Convention that between 6,000 and 7,000 boys were placed on farms last year, and in 1918 they hoped to enlist 15,000. Altogether the Branch succeeded in putting between 15,000 and 18,000 people on the land in Ontario in 1917.

Of the resolutions carried by the Convention, one asked that the Government remove the duty on spray machinery; another pledged the support of the Association to assist in maintaining production, and still another asked for a development of the evaporating and canning industries in the various fruit districts in order that second-grade fruit might be conserved. The young ladies of the province who assisted in the harvest last season also received the thanks of the Association.

Motion pictures showing various phases of the fruit industry and actual practices were a feature of the Convention. These were screened by the Motion Picture Bureau of the Provincial Department of Agriculture.

#### Sunscauld and Its Prevention.

By sunscauld we mean the dead areas so commonly found on the south or southwest side of the trunks of apple, plum and cherry trees and sometimes also on the upper side of large branches, on the side most exposed to the sun. These injuries in most cases do not kill the trees, but they weaken them, and often lead to their death by affording favorable opportunities for the entrance of the Black Rot fungus which causes so many of the cankers of apple trees, and also of the Heart Rots which soften and decay the wood of trees and make them break easily.

Sunscauld injuries take place chiefly in late winter and early spring, especially in the months of February and March. They are caused by the killing of the tissues of the bark by extreme and sudden changes of temperature, such as occur in bright, frosty weather. In the daytime on these bright, calm days, the sun's rays striking the tree on the south-west side of the trunk warm up the bark there much higher than the surrounding atmosphere and then when the sun sets these areas cool down very quickly, sometimes as low as zero or even lower. When this is repeated several times the tissues of the bark are killed and we have the formation of sunscauld injury.

#### Methods of Prevention.

1. When setting out orchards incline the trees towards the south-west and head them low. This helps to shelter the trunks from the sun.
2. Hardy varieties suffer much less than tender varieties, hence only varieties hardy enough for the district should be chosen. As the trunks of Transcendent and Martha crabs are almost immune to such injuries it would naturally appear to be a good plan to have trunks and crotch of such stock and to bud or graft the desired variety of apple upon the branches.
3. When dehorning old apple trees never remove all the centre, thus exposing the large branches to the sun, but keep the top shaped like an umbrella.
4. Trunks may be protected from sunscauld by wrapping them from the ground to the crotch with common white building paper, or with veneer or by tacking a board up on the south or south-west side, or by keeping them whitewashed on these sides with a thick coat of whitewash made by slaking about 40 lbs. of freshly slaked lime in 20 gallons of water and applying this with a whitewash brush.

The dead bark on all unscauld areas on the trunks should be removed with a drawknife in spring or summer and the wound covered with white lead paint or coal tar.

L. CAESAR, Provincial Entomologist.

## FARM BULLETIN.

### Conditions in Pontiac Co., Que.

EDITOR "THE FARMER'S ADVOCATE":

Pontiac Co., Que., had a very good season in 1917. The spring opened about April 22nd in this section and continued pretty dry through May, which permitted farmers with low land not very well underdrained to get in the grain in good condition. June and the first half of July were pretty showery, and the hay crop, which was a little above the average in yield, was mostly cut after July 20th. A week of very hot, dry weather during the last of July hurried in the grain on all kinds of soils, but on sandy land the result was a serious decrease in the yield, particularly in oats. Potatoes and roots also suffered very much; some of the former having their leaves so badly scorched that they never recovered after it. Corn which, owing to the cool, damp weather in June, was looking sickly began to pick up, and had it

not been for heavy frosts coming early in September would have been a good crop. Longfellow corn sometimes ripens in this district, and home-grown seed when properly dried out gives a much better crop than the seed we get from Western Ontario, but last year very few were successful in getting any ripened. Very little clover was reserved for seed, and the yield from those plots that are hulled are not large. The amount of seed in this section will not be one-quarter of that threshed in 1916, when the two local hullers were kept busy most of the winter.

Live stock are coming through in good condition, and with the exception of a few cases of distemper among horses I have heard of very few losses among stock. Butter-fat has been selling for 50 cents per lb. at Ottawa all winter, and a large quantity is shipped there from this district. Sheep are in great demand—good grade ewes sell at \$20 and up to \$26 each. Horses are not in much demand now except a few young mares that are being bought by Western farmers who are home for the winter. Farmers here are in the same boat as all the rest of the country, trying to work their farms and attend their stock with insufficient help, and in a great many cases both the work and the stock are not getting the attention they require, and the result is most unsatisfactory. One farmer, though working with all his might, was caught with seven acres of fairly good corn which he was unable to get in till after the first fall of snow came and caught it lying in bundles on the field, when a big drove of cattle broke in and made such a mess of it before discovered that it was past doing anything with. He should have had the fence secure, no doubt, but there is a limit to what a man can do, and in that case he had planted and cared for more than he could get properly saved. Almost all the farmers in this district are planning to raise more pigs in 1918. Some are wondering if there will not be more pigs than feed. Despite all facts corn cannot be got at all, and shorts are still selling retail here at \$50 per ton. Coal is scarce here now but there are millions of cords of good wood in Pontiac but it is not cut, and though some are offering as high as \$2.00 per cord for men to cut it in 22-in. lengths yet the men cannot be got. Every one is as busy as everybody else, and if you want anything done the only way is to do it yourself. Very few cattle are fattened in the barn here; a good many feed some meal from March till grass comes, and have them fit to sell by the first of July. Good cows are selling at 9 cents per lb. and heavy bulls at a cent more. Milk cows and forward springers at \$90 up, according to their size and appearance.

Pontiac Co., Que.

PONTIACIA.

### Only 500,000 Bushels of Seed Corn Available.

G. H. Clark, Seed Commissioner, met the wholesale seedsmen in Toronto last Friday with the purpose of working out a scheme of distribution for such seed corn as Canada will be able to obtain from the United States this year. The United States has placed an embargo on seed corn coming to Canada, but the War Trade Board of that country are allowing 500,000 bushels to be exported to this country under special arrangements, none of the corn to come from the northern States, and only from Missouri, Kansas, Tennessee, Virginia and states south of these. This corn will be useful only for silage purposes, and will consist for the most part of Mammoth Southern Sweet, Red Cob, and perhaps some Leaming. The varieties which our silage growers have become accustomed to will not be available. Moreover, no northern grown seed will be included. The seed corn situation is rather serious. Canadian wholesale seedsmen, among whom are included the United Farmers of Ontario and Farmer's Clubs, will be allowed 5 per cent. for handling the seed corn in car lots, and 7½ per cent. for sales in smaller quantities than carloads. Already 100,000 bushels have been ordered through the Seed Commissioner. If you want silage corn get your order in.

### Threshing Gangs.

EDITOR "THE FARMER'S ADVOCATE":

The suggestion of our Provincial Department of Agriculture to send out threshing gangs is, to my mind, one which affords room for much discussion. Theoretically the proposition is sound; the assistance is needed, and if the time now spent in threshing could be utilized in fall plowing a great increase in production and a marked decrease in weeds would undoubtedly be the result. However, there are many difficulties in the way of making the suggestion a practical success, and until more definite information is given out as to how the Department intends to carry their suggestion into effect, it seems impossible to express an intelligent opinion as to how the scheme will work out in practice.

Carleton Co., Ont.

HEBER SHAW.

There were ten cows and heifers qualifying for admission to the Record of Performance during December. Louisa Gerben was first in the mature class with a record of 16,815 pounds of milk. Victoria May Nanuet qualified in the four-year-old class with 12,213 pounds of milk. The three-year-old class was headed by Orchard Leigh Butter Girl. Her milk record was 13,495 pounds. Dusky Mercedes Baroness was first in a class of five two-year-olds. She gave 13,666 pounds of milk, yielding 510 pounds of fat.

**The Dryden-Miller Record Short-horn Sale.**

The Dryden-Miller Shorthorn sale, the event in Shorthorn annals to which all admirers of the breed on the American continent looked forward to for some time, is now real history. It will not soon be forgotten in this country or in the United States. Messrs. Dryden & Miller deserve all the credit and honor which they may receive through this successful auction, a sale which has made an average of which any breeder in the world might well feel proud. They were a grand, good lot of deep, thick, smooth, evenly-fleshed Scotch cattle with pedigrees to suit the most fastidious. The attractive offering brought together the largest crowd ever seen at a Canadian live stock auction. Over one thousand people crowded the sales ring at the Union Stock Yards, Toronto, and while buyers of the eighty-nine lots sold numbered only forty-three, there were an unusually large number of spirited bidders around the ring. Carey Jones sold the lot for \$94,700 in three hours. They made the good average of \$1,064 each. Particularly attractive were the large number of imported cows with calves at foot and re-bred to some of the best bulls of the breed. Altogether, upwards of forty head of the females had calves with them. They were a good lot. The highest price of the sale was \$3,100, paid by L. J. Gridley, Sunset Farm, Bloomington, Ill., for the five-year-old Clipper Favorite 2nd, a choice young red cow. Second highest price was reached when the bull calf, Real Sort, just turned a year old, fell to the bid of C. F. Hauf & Son, of Glendo, Wyoming, for \$2,700. He was bred by Mr. Dryden and is a big, straight Roan Lady son of the Dryden-bred bull Better Sort. J. J. Elliott, of Guelph, Ont., took the roan heifer, Emma 62nd, at \$2,600. She is one of the thick kind and is just over the year old. Geo. Gier & Son, Grand Valley, Ont.; G. W. McLaughlin, Oshawa, Ont.; T. A. Russell, Downsview, Ont.; J. J. Murray, Zurich, Ont.; J. J. Elliott, of Guelph, Ont.; Percy De Kay, Elmira, Ont., and Geo. Brown, Regina, Sask., were among the heaviest Canadian purchasers. But why mention any in particular? All buyers helped the sale, themselves and the breed, and we list them all. Our United States neighbors didn't have it all their own way. Canadian breeders bought sixty-two of the eighty-nine lots sold, and twenty-seven went to the United States at \$31,425, an average of \$1,164 each. The Canadian breeders are to be congratulated upon keeping so many good cattle in this country. They paid \$63,275 for the sixty-two head which remain in Canada, or an average of \$1,020.50 each. The seventy-eight females sold for \$85,175, an average of \$1,092 each, and the eleven bulls brought \$9,525, an average of \$865.90 each. The following is a complete list of lots sold with prices paid. Readers will note that Western Canada took some good cattle, as well as Ontario and several States of the Union.

Nonpareil 49th, David Warnock & Son, Loveland, Col.	\$1,600
Millcraig Ivorna, F. Galtmeyer, Mechanicsville, Ohio	1,000
Beaufort Rosemary 12th, Geo. Gier, Grand Valley, Ont.	1,500
Marchioness 11th, J. J. Elliott, Guelph, Ont.	1,500
Millcraig Rosebud, Jas. Douglas, Caledonia, Ont.	1,200
Braelangwell Broadhooks, H. B. Peters, Carland, Mich.	1,225
Eliza 30th, Geo. Brown, Regina, Sask.	1,600
Lady Cumberland, H. B. Peters	975
Rubyhill 29th, Reynolds Bros., Lodi, Wis.	1,400
Durno Princess Royal, Percy De Kay, Elmira, Ont.	800
Maggie of Towie 4th, C. F. Hauf & Sons, Glendo, Wyoming	1,000
Millcraig Princess, D. Warnock & Son	950
Millcraig Rosalie, T. A. Russell, Downsview, Ont.	1,500
Violet of Towie 3rd, Wm. Dunbar, Guelph, Ont.	825
Butterfly 65th, D. Warnock & Son	1,350
Lady Caroline 8th, Geo. Brown	2,200
Brandsby's Waterloo, J. J. Murray, Zurich, Ont.	1,025
Princess Julia 3rd, Geo. W. McLaughlin, Oshawa, Ont.	1,475
Golden Bud 4th, C. F. Hauf & Sons	1,400
Cluny Flora 119th, N. Littlejohn & Sons, Highgate, Ont.	1,600
Lavender Lady 4th, G. W. McLaughlin	1,250
Brawith Rose Bloom, J. J. Elliott	1,300
Boyndie Princess, D. Warnock & Son	800
Rosewood 92nd, G. W. McLaughlin	1,550
Findon Broadhooks 7th, Geo. Gier	1,125
Golden Butterball, J. J. Murray	1,300
Victoria Rosemary, D. Warnock & Sons	1,325
Jessica 10th, Roy Nethercott, Science Hill, Ont.	950
Windsor Belle 19th, D. Warnock & Son	1,225
Bessie Broadhooks, C. F. Hauf & Sons	1,300
Beaufort Rosemary 11th, J. J. Elliott	1,550
Crocus 16th, C. J. Slack, Claremont, Ont.	900
Spruce Hill Missie, C. F. Hauf & Sons	1,250
Golden Hope 20th, D. Warnock & Son	650
Clipper Favorite 2nd, L. J. Gridley, Bloomington, Ill.	3,100
Beaufort Waterloo 8th, T. A. Russell	2,000
Violet of Towie 2nd, Waddell Bros., Ailsa Craig, Ont.	825
Marchioness 10th, J. J. Murray	825
Findon Broadhooks 4th, Pettit Bros., Freeman, Ont.	675
Braelangwell Butterscotch 3rd, F. W. Scott, Highgate, Ont.	625
Maria 19th, J. A. Watt, Elora, Ont.	1,200
Butterfly 52nd, A. G. Walker, Carnegie, Man.	650
Broadhooks Lass, Rob't. Miller, Stouffville, Ont.	725
Broadhooks Victress, D. Warnock & Son	800

Braelangwell Dairymaid, J. M. Gardhouse, Weston, Ont.	1,075
Allerston Marigold 6th, C. F. Hauf & Sons	950
Undine of Towie 2nd, Pettit Bros.	675
Dorothy Lady, J. R. Johnston, Ashburn, Ont.	700
Goldie's Dame, C. F. Hauf & Sons	800
Highland Ruth, Frank Smith & Sons, Scotland, Ont.	750
Stearsby's Jennie, Frank Smith	625
Cluny Augusta 11th, G. W. McLaughlin	1,450
Cluny Clipper, G. W. McLaughlin	1,300
Newton Roan Bess 2nd, Rob't. Amos, Moffat, Ont.	1,050
Miss Ramsden 15th, B. Pierce, Longwood, Ont.	800
Dinorah 6th, T. B. Ralph	850
Nonpareil Flirt, Gerrie Bros., Elora, Ont.	900
Mary Ann of Lancaster 34th, A. G. Farrow, Oakville, Ont.	925
Lovat Marchioness 2nd, R. G. Heaslip, Brussels, Ont.	750
Lovat Marchioness 3rd, Geo. Kinnon, Cottonwood, Sask.	900
Jilt 3rd, Fraser Auld, Eden Mills, Ont.	1,000
Newton Butterfly 2nd, G. W. McLaughlin	1,100
Broadhook's Lady, J. C. Andrew, Lafayette, Ind.	700
Windsoria Belle, D. Warnock & Son	1,000
Beaufort Tea Rose, H. B. Peters	700
Highland Ruth 2nd, D. Warnock & Son	675
Broadhook's Peace, W. C. Sutherland, Galt, Ont.	525
Lady Lancaster 21st, J. C. Andrew	1,100
Augusta Snowdrop, T. A. Russell	1,500
Nonpareil Lady, Percy De Kay	700
Emma 62nd, J. J. Elliott	2,600
Lavendar Snowflake, G. W. McLaughlin	1,025
Village Lassie 9th, Alex. Watt, Elora, Ont.	900
Pine Grove Clipper 23rd, J. C. Andrew	900
Mary Jane Strathallan, C. F. Hauf & Sons	650
Rosebud 7th, G. W. McLaughlin	525
Countess 2nd, G. W. McLaughlin	525
Myrrha, Geo. Kinnon	525

**Males.**

Cluny Nonpareil Brigadier, W. B. Campbell, Campbellcroft, Ont.	\$ 525
Bruich Champion, G. W. McLaughlin	1,650
Beaufort Wellington, Jos. White, St. Mary's	1,125
Beaufort Frank, F. H. Neil, Lucan, Ont.	600
Royalist, E. W. Stein, Streetsville	500
Ringleader Choice, C. F. Hauf & Sons	700
Real Sort, C. F. Hauf & Sons	2,700
Clipper Sort, Macdonald Bros., Woodstock, Ont.	650
Augusta Knapton, D. C. Ross, Woodville, Ont.	325
Village Sort, McKinnon Bros., Rockwood, Ont.	350
Bluster, Geo. Kinnon	400

78 females brought a total of \$85,175, an average of \$1,092 each; 11 bulls brought a total of \$9,525, an average of \$865.90 each.

**The First Step in Big Winter Fair Organization.**

The representatives elected by the various live stock breeders' associations to confer regarding, and if deemed advisable finally make arrangements for the establishment of a winter live stock show in Canada, national or international in scope, met at a dinner at the Prince George Hotel, Toronto, Friday evening, Feb. 22, and after considerable discussion decided unanimously in favor of a bigger winter show than any now held in Canada. Wm. Smith, M.P., of Columbus, Ont., President of the Eastern Canada Live Stock Union, called the meeting to order, and nominated W. A. Dryden, of Brooklin, Ont., chairman.

The general consensus of opinion expressed freely by the delegates was that bigger and better accommodation was required if a show of the proposed magnitude was ever to become successfully established. Some reference was made to the Ontario Provincial Winter Fair held annually at Guelph, where accommodation for exhibitors, exhibits and spectators is not large enough to meet the demands already made upon it. The present arrangement at Guelph has two more years to run. However, most of the delegates seemed to think that the new show should not be considered just now with the idea of putting an end to the Provincial Winter Fair, but that a bigger and broader viewpoint should be taken with the idea of establishing a national or international show without thought of interfering with any show now in existence. Accordingly D. C. Flatt, of Hamilton, moved and Alex. Hume, of Campbellford, seconded this resolution: "That it is advisable to take steps to organize an International Live Stock and Dairy Show."

Following this resolution W. W. Ballantyne, of Stratford, pointed out that we have no real dairy show in Canada, and that for some time representatives of the various dairy interests had been considering the advisability of establishing a dairy show, but in his opinion the dairymen would be assured of greater success if they combined with the other live-stock and agricultural interests in a national or international show such as suggested by the resolution. All speakers were agreed that all live-stock and agricultural interests should be included on the fairest possible basis. There was an absence of any feeling of jealousy as between representatives of the various breeds and classes of stock. Everyone was willing and ready to give "the other fellow" a fair deal. Perfect harmony prevailed throughout, and the meeting got down quickly to the business of temporary organization.

Following a resolution the meeting appointed three members from each of the following interests to go

further into the matter: heavy horses, light horses, beef cattle, dairy cattle, sheep, swine, poultry and dairy products, and grain and seeds.

The representatives appointed were: Chairman, W. A. Dryden, Brooklin; Vice Chairman, W. W. Ballantyne, Stratford. Representing heavy horses: Wm. Smith, Columbus; Peter Christie, Manchester; E. C. H. Tisdale, Beaverton. Light horses: Geo. Pepper, Toronto; James Cowan, Cannington; H. M. Robinson, Toronto. Beef cattle: H. M. Pettit, Freeman; James Bowman, Guelph; L. O. Clifford, Oshawa. Dairy cattle: D. C. Flatt, Hamilton; John McKee, Norwich; B. A. Bull, Bramp-ton. Sheep: James Douglas, Caledonia; J. M. Gardhouse, Weston; Lt.-Col. R. McEwen, London. Swine: J. D. Brien, Ridgetown; J. E. Brethour, Burford; H. A. Dolson, Norval. Poultry: John Saunders, London; W. W. Simpson, Guelph; J. G. Henderson, Hamilton. Seeds: A. McKenney, Amherstburg; W. J. W. Lennox, Toronto; W. J. Squirrel, Guelph. Dairy produce: G. A. Putnam, Toronto; G. G. Publow, Kingston; Frank Hens, London. Prof. G. E. Day was appointed Secretary, and John Gardhouse, Weston, Assistant Secretary.

The various associations represented will be asked to finance the proposition in the initial stages of organization.

**Supply of Spring Wheat Available.**

Owing to the comparatively small acreage of fall wheat sown in certain sections of Ontario last fall, the sowing of spring wheat has been advocated to help meet the food shortage. In order to facilitate farmers in securing seed of good milling quality and that will do well on Ontario soil, the Ontario Government has purchased 50,000 bushels of No. 1 Marquis spring wheat and are arranging for the distribution of the same. The seed will be shipped to warehouses in various parts of the Province, from where it will be distributed. Orders may be placed with the District Representative, or direct to the Markets Branch, Department of Agriculture, Parliament Buildings, Toronto, or in warehouse at distributing points. The price is \$2.74 per bushel, and cash is required with the order. The wheat will be in two-bushel bags, and an even number of bushels should be ordered as bags will not be broken. It is understood that names of distributors will be announced at an early date. The Government are to be congratulated on the action they have taken in this regard.

**Dates Fixed For Next Guelph Winter Fair.**

At the annual meeting of the Guelph Winter Fair Association, held in Toronto on February 22, the dates for the 1918 Ontario Provincial Winter Fair were fixed at December 6 to 12. These dates will not conflict with those of the Chicago International. The financial statement showed the Association to be prosperous. Last year the prize money totalled over \$21,000, and the year's business showed a turn-over of nearly \$43,000. A credit balance of something over \$400 was reported. The following officers were elected: Hon. President, W. W. Ballantyne, Stratford; President, J. I. Flatt, Hamilton; Vice-President, John Gardhouse, Weston; Secretary-Treasurer, R. W. Wade, Parliament Buildings, Toronto. Executive: John A. Boag, Queensville; Peter Christie, Manchester; R. S. Stevenson, Ancaster; W. Whitelaw, Guelph; J. D. Brien, Ridgetown; Wm. McNeil, London; A. McKenney, Amherstburg.

A new Department of State has been created by Sir Robert Borden, under the name of the Soldiers' Civil Re-establishment Department, with Sir James Loughheed as the Minister, and F. B. McCurdy as Secretary.

Why should the farmer have to take a set price for products he has for sale and then be obliged to purchase feeds, implements and other necessities on an ever-rising market, was the question asked by more than one dairyman at the E. O. D. A. Convention.

Farmers are not profiteers. Most are satisfied if they get cost of production, plus a reasonable rate of interest on investment. There is reason to believe that some have less than hired men's wages left for themselves and family after running expenses have been met.

The price of cheese was set by the British Government and not by the cheese commission. The latter got as high a price for the Canadian product as they could and then facilitated shipments, secured finances to handle the product, arranged for exchange, etc., and by so doing averted a crisis.

When asked for his views on the importation into and manufacture of oleo in Canada by H. Glendinning, at the E. O. D. A., A. A. Ayer replied: "I am opposed to oleo because it is a competitor of dairy products and also has a detrimental effect on the health of children, as demonstrated by experiments carried on at the Johns Hopkins University."

Pasteurization improves the keeping quality of butter. Geo. H. Barr mentioned at the E. O. D. A. of a 14-pound box of butter made in the West in April from cream pasteurized at 170 degrees, which he had shipped to Montreal and held in storage until Christmas. The quality was then better than the average butter coming on to the market at the time.

# Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending February 21.

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 Feb. 21	Same Week 1917	Week Ending Feb. 14	Week Ending Feb. 21	Same Week 1917	Week Ending Feb. 14	Week Ending Feb. 21	Same Week 1917	Week Ending Feb. 14	Week Ending Feb. 21	Same Week 1917	Week Ending Feb. 14
Toronto (Union Stock Yards)	5,101	2,572	2,834	\$12.25	\$11.00	\$11.75	679	709	582	\$17.00	\$14.75	\$17.00
Montreal (Pt. St. Charles)	555	763	402	12.25	10.75	11.25	528	331	257	16.00	13.00	16.00
Montreal (East End)	348	807	397	12.25	10.75	11.25	378	645	163	16.00	13.00	16.00
Winnipeg	1,335	1,671	1,721	11.50	10.00	12.00	28	37	41	12.00	9.00	12.50
Calgary	943	717	1,619	11.50	8.75	11.00						

	HOGS						SHEEP					
	Receipts		Top Price Selects				Receipts		Top Price Good Lambs			
	Week Ending Feb. 21	Same Week 1917	Week Ending Feb. 14	Week Ending Feb. 21	Same Week 1917	Week Ending Feb. 14	Week Ending Feb. 21	Same Week 1917	Week Ending Feb. 14	Week Ending Feb. 21	Same Week 1917	Week Ending Feb. 14
Toronto (Union Stock Yards)	8,175	6,800	7,332	\$19.10	\$14.75	\$19.00	565	353	848	\$19.00	\$15.25	\$19.00
Montreal (Pt. St. Charles)	1,991	1,668	603	19.75	15.60	19.75	121	111	112	17.00	14.25	17.00
Montreal (East End)	1,348	1,622	670	19.75	15.60	19.75	85	157	34	17.00	14.25	17.00
Winnipeg	7,533	6,599	6,417	18.75	14.00	18.75	6	343	19			16.50
Calgary	2,575	3,474	3,150	19.25	13.25	19.00	48	109		10.75		

## Market Comments.

### Toronto (Union Stock Yards)

Approximately five thousand cattle were on sale during the week, two thousand and being offered on the Monday market, eight hundred on Tuesday, sixteen hundred on Wednesday, and the balance on Thursday. With a liberal demand prevailing, prices advanced on Monday morning in a very active market, all cattle ruling from 25 to 40 cents per hundred above the closing prices of the previous week. Demand continued strong throughout the week, and on Wednesday, choice cattle were selling a shade above Monday's prices, while the market closed on Thursday with cattle in continued active demand. While there are a number of choice cattle being marketed, there is still quite a number of unfinished cattle coming forward. Very few heavy cattle were on sale, there being only a few lots offered that weighed over twelve hundred pounds. Of the best quality animals over that weight, ten head sold on Monday at \$12.75 per hundred, another draft of ten realized \$12.25, while a straight load was weighed up at \$12. Wednesday \$12 per hundred was about the top for this grade, the quality being scarcely as good on that date. For steers of ten hundred to twelve hundred pounds, \$11.90 was the highest figure on Monday, being paid for a straight load weighing well over eleven hundred pounds. In addition between three and four hundred steers within these weights sold from \$11.35 to \$11.85, fifteen head of eleven hundred pounds bringing the latter price, while thirty-three head sold at \$11.75, and twenty-six at \$11.70. On Tuesday two head of eleven hundred and thirty-five pounds sold at \$12.25, and on Wednesday and Thursday quite a number of sales were made from \$11.50 to \$12. Of the steers and heifers under ten hundred pounds, a pair of choice yearlings sold on Monday at \$14.25, while on Wednesday eleven head of nine hundred and eighty pounds each realized \$12; the top price on Monday for a straight load was \$11.50, while on Wednesday thirty head sold at \$11.75. Close to five hundred head were weighed up on Monday at prices ranging from \$10.75 to \$11.50, most of them bringing from \$11 to \$11.25. On Wednesday and Thursday a number of loads sold from \$11.25 to \$11.75 per hundred. Cows and bulls were in active demand in sympathy with the demand for other grades of cattle, most of those of choice quality selling from \$10 to \$10.50, although a number of choice cows sold during the week at \$11. Good cows sold from \$9 to \$9.75, medium from \$7.74 to \$8.75, and common from \$6.50 to \$7.50. A few extra choice bulls of fourteen hundred to sixteen hundred pounds reached \$11 during the week, but most of the choice ones sold from \$10 to \$10.75, medium from \$9 to \$9.75, and common Bologna from \$7.75 to \$8.75. Little trading was done in stockers and feeders, and only a few loads were shipped to country points. Calves were in active demand, choice veal reaching \$17, while the majority of the best calves brought from \$15 to \$16.50, and common from \$9 to \$12.

Sheep receipts were light, amounting to about five hundred head for the week. The trading in this department was a little more active than that of the previous

CLASSIFICATION	No.	TORONTO (Union Stock Yards)		MONTREAL (Pt. St. Charles)	
		Avg. Price	Price Range Bulk Sales	Avg. Price	Price Range Bulk Sales
STEERS					
heavy finished	118	\$12.00	\$11.50-\$12.50		
good	455	11.57	11.00-12.00	47	\$11.65-\$11.00-\$12.25
1,000-1,200 common	75	10.25	9.75-10.75	7	10.60-10.50-10.75
STEERS 700-1,000					
good	1,374	11.11	10.50-11.50	48	11.10-10.75-11.50
common	264	9.64	9.00-10.25	96	10.00-9.00-10.25
HEIFERS					
good	461	11.26	10.75-11.75	49	11.00-10.50-11.50
fair	546	9.88	9.00-10.50	19	9.60-9.25-10.25
common	14	8.75	8.00-9.50	12	8.75-8.00-9.00
COWS					
good	293	9.39	9.00-9.75	31	9.90-9.75-10.75
common	625	7.75	7.00-8.50	87	9.00-8.50-9.50
BULLS					
good	93	9.52	9.00-10.00	19	10.30-10.50-10.75
common	42	8.06	7.75-8.75	29	8.00-7.50-8.25
CANNERS & CUTTERS	268	6.25	6.00-6.50	81	6.60-6.00-7.00
OXEN					
CALVES					
veal	622	15.04	14.00-16.00	528	14.50-10.00-16.00
grass	57	8.00	7.00-10.00		10.00
STOCKERS					
good	41	8.50	8.00-8.75		9.00
fair	29	7.75	7.50-8.00		8.25
FEEDERS					
good	348	10.02	9.50-10.50		10.50
fair	55	9.43	8.75-9.75		9.75
HOGS					
selects	7,692	19.06	18.75-19.00	1,598	19.60-19.50-19.75
heavies					
lights	318	17.50	16.75-18.00	369	19.00-18.75-19.25
sows	159	17.50	16.75-18.00	21	17.40-17.25-17.50
stags	6	14.96	14.75	3	
LAMBS					
good	417	18.39	18.00-19.00	30	16.10-16.00-17.00
common	60	16.00	15.00-17.00	32	15.35-15.00-16.00
SHEEP					
heavy	41	12.00	11.00-13.00		13.00
light	36	13.00	12.00-14.00		14.50
common	11	8.00	7.00-9.00	59	13.00-13.00

week. A few choice lambs sold at \$19, and most of the best lambs offered sold from \$18 to \$18.75, light sheep from \$13 to \$14.50, heavy sheep from \$11 to \$13, and culls from \$7 to \$10.

Hog receipts totalled about ten thousand head, two thousand of which were consigned direct to a local abattoir; in addition several hundred were billed through. Select hogs sold on Monday and Tuesday at \$19 per hundred, fed and watered. On Wednesday and Thursday a number of sales were made at \$19.10, the market closing firm under an active demand on the latter day.

Of the disposition from the Yards for the week ending February 14th, Canadian packing houses bought 352 calves, 75 bulls, 20 heavy steers, 2,245 butcher cattle, 7,639 hogs and 663 sheep and lambs. Local butchers purchased 221 calves, 310 butcher cattle, 63 hogs and 60 sheep and lambs. Canadian shipments were made up of 58 calves, 93 milch cows, 20 butcher cattle, 186 stockers and 89 feeders. There were no shipments made to United States points during the week.

The total receipts from January 1st to February 14th, inclusive, were 27,317 cattle, 2,915 calves, 47,494 hogs, and 7,802 sheep; compared to 33,036 cattle, 34,357 calves, 64,394 hogs and 8,470

sheep received during the corresponding period of 1917.

### Montreal.

The total receipts of cattle at the Montreal yards were twelve hundred head compared to nine hundred the previous week and fourteen hundred and fifty, two weeks ago. A larger percentage of grain-fed stock than at any time during the last six months was on hand, while the remainder of the stock consisted largely of fair to good quality heifers and steers weighing from nine hundred to eleven hundred and fifty pounds. These classes of stock met with the requirements of the trade and quick sales were made throughout at strong prices, and in some instances at advances of from 25 to 50 cents per hundred. One steer weighing ten hundred and fifty pounds sold at \$12.25 per hundred, this price being obtainable on account of the high dressing quality, the carcass dressing five hundred and ninety pounds, or 56.2 per cent. of the live weight. Thirty head averaging nine hundred and eighty pounds, made up of a few steers weighing up to twelve hundred pounds and the remainder of light steers and heifers of various weights, sold at \$11.75 per hundred. All were of good finish and high dressing percentage. Thirty-five steers weighing from ten hundred and fifty to eleven hundred and

fifty pounds sold from \$11.50 to \$11.75, while ten heifers weighing around nine hundred pounds sold at \$10.50. Receipts of bulls were light and of a very wide range of quality.

Prices were firm at a wide spread, sales being made from \$7.50 to \$10.75, the latter price being realized on eleven head shipped in from the Union Stock Yards, Toronto, Ont. Very few choice cows were on hand, the majority of cows offered being of fair to good grading and selling from \$8.50 to \$9.50 per hundred, choice animals sold from \$9.75 to \$10.50. Canner cows sold at \$6 per hundred, being 50 cents higher in price than at the close of the previous week, while cutters also advanced and sold up to \$7. About nine hundred veal calves, all of dairy breeding, were offered. Sales were quickly made at from \$13.50 to \$16 for those of good quality, \$12 per hundred for heavy veal, and \$10 for those in thin flesh.

Sheep and lambs were few in number, totalling only two hundred and six head on the two markets. Sheep sold at \$13, and lambs around \$16.50. Choice hot-house lambs, which are in light demand, sold at \$12 each during the week.

The run of hogs totalled over three thousand head compared to fifteen hundred thousand head compared to fifteen hundred last week. Despite the increase in receipts and the indifferent quality, the

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**THE ROYAL BANK OF CANADA**

Capital Authorized - - - \$ 25,000,000  
 Capital Paid Up - - - - 12,900,000  
 Reserve Funds - - - - - 14,300,000  
 Total Assets - - - - - 270,000,000

**HEAD OFFICE, MONTREAL**

Branches throughout every Province of the Dominion of Canada

Accounts of Farmers Invited  
 Sale Notes Collected

Savings Department at all Branches

market was exceptionally strong, the majority of the run selling at \$19.50 for selects, fed and watered. This price was on contracts made the previous week, and \$19.75 was being offered at the close. The average weight of the hogs sold was one hundred and fifty pounds.

**Pr. St. CHARLES.**—Of the disposition from the Yards for the week ending February 14th, Canadian packing houses and local butchers bought 257 calves, 71 canners and cutters, 29 bulls, 255 butcher cattle, 603 hogs and 112 sheep and lambs. Canadian shipments were made up of 47 milch cows. There were no shipments made to United States points during the week.

The total receipts from January 1st to February 14th, inclusive, were 4,254 cattle, 1,249 calves, 6,909 hogs and 4,706 sheep, compared to 6,029 cattle, 1,796 calves, 6,851 hogs and 4,249 sheep, received during the corresponding period of 1917.

**EAST END.**—Of the disposition from the Yards for the week ending February 14th, Canadian packing houses and local butchers purchased 163 calves, 397 butcher cattle, 670 hogs, and 34 sheep and lambs. There were no Canadian shipments or shipments to United States points during the week.

The total receipts from January 1st to February 14th, inclusive, were 5,093 cattle, 1,160 calves, 5,118 hogs and 4,373 sheep, compared to 6,920 cattle, 1,801 calves, 7,547 hogs and 5,413 sheep, received during the corresponding period of 1917.

**Buffalo.**

Cattle.—Not for many weeks past has the steer trade been as bad as at Buffalo last week. A badly depressed trade the week before was continued, as a result of which sellers were forced to accept a full half dollar a hundred lower prices than for the preceding week, and in some cases as much as seventy-five cents and a dollar under the previous week's level on a medium, fairish kind of steers. While a few choice handy butchering steers sold at about steady prices, the general market on butchering steers was a quarter to a half lower. Best shipping steers ranged from \$12.25 to \$12.60, with the best handy steers running from \$11.25 to \$11.50. Yearlings reached \$12. A lot of western beef being dumped on the local markets, together with a bad beef trade east, and the fact that recent prices, killers say, have been so high as that they could not get their money back out of higher-priced steers, are given as the contributing causes. On females generally it was about a steady market, fat cows, however, selling to better advantage than heifers. Bulls of all classes sold at about steady prices. Milk cows and springers brought good prices, while the trade was light on stocker and feeder stuff. With the Lenten season on, sellers are not looking for much of an improved market, for the immediate future. Receipts for the week totaled 2,875 head, as against 3,475 for the preceding week, and 4,425 head for the corresponding week last year.

Quotations:  
 Shipping Steers.—Natives, choice to prime, \$12.50 to \$13; fair to good, \$11.50 to \$12.25; plain, \$10.25 to \$11.25; very coarse and common, \$9.75 to \$10.  
 Shipping Steers, Canadians, best, \$11.25 to \$11.50; fair to good, \$10.75 to \$11; common and plain, \$9.50 to \$10.  
 Butchering Steers.—Choice heavy, \$11.75 to \$12; fair to good, \$11.25 to

\$11.50; best handy, \$11.20 to \$11.50; fair to good, \$10 to \$11; light and common, \$9 to \$9.75; yearlings, choice to prime, \$12.50 to \$13; fair to good, \$11.75 to \$12.

**Cows and Heifers.**—Best heavy heifers, \$10.75 to \$11.25; good butchering heifers, \$10.25 to \$10.50; fair butchering heifers, \$9 to \$9.75; common, \$7 to \$8; very fancy fat cows, \$10 to \$10.50; best heavy fat cows, \$9.50 to \$9.75; good butchering cows, \$8.50 to \$9; medium to fair, \$7 to \$7.50; cutters, \$6.00 to \$6.75; canners, \$4.50 to \$5.75.

**Bulls.**—Best heavy, \$10 to \$11.50; good butchering, \$9 to \$9.50; sausage, \$7.75 to \$8.00; light bulls, \$6.25 to \$7; oxen, \$9 to \$12.

**Stockers and Feeders.**—Best feeders, \$8.50 to \$9; common to fair, \$7.25 to \$8; best stockers, \$7.50 to \$8; fair to good, \$6 to \$7; common, \$5 to \$5.75.

**Milchers and Springers.**—Good to best, small lots, \$90 to \$120; in carloads, \$80 to \$100; medium to fair, small lots, \$75 to \$85; in carloads, \$65 to \$80; common, \$45 to \$50.

**Hogs.**—A good supply was offered the fore part of last week, but after Tuesday receipts were light, and as a result prices were on the jump. Monday's top was \$17.60, bulk of the good hogs moved at \$17.50, and the general price for pigs was \$16.25. Tuesday's trade on the better weight grades was steady, with pigs selling from \$15.75 to \$16. Wednesday's range was from \$17.50 to \$17.70, with pigs mostly \$16; Thursday heavies sold from \$17.50 to \$17.70, Yorkers reached \$17.80, and pigs landed at \$16.25. Friday's market was the highest in over four weeks. The fifth day of the week showed mediums and heavies selling from \$18 to \$18.15, Yorkers and mixed grades moved from \$18.10 to \$18.30, and pigs reached \$17. Range on roughs was from \$15.50 to \$16.25, and stags went from \$14.50 down. For the week receipts totaled 20,900 head, as against 22,707 head for the week before, and 17,000 head for the same week a year ago.

**Toronto.**

Live-stock receipts at Union Yards, West Toronto, Monday, Feb. 25, were: 149 cars, 2,653 cattle, 115 calves, 2,212 hogs, 135 sheep and lambs. Butcher steers and heifers opened steady but closed slow and 25 cents lower. Cows and bulls, strong; prices steady. Milkers, springers, stockers, feeders, steady. Sheep, lambs and calves strong at last week's prices. Hogs, \$19.25 fed.

**Breadstuffs.**

Wheat.—Ontario, No. 2, winter, per car lot, \$2.22; (basis in store Montreal). Manitoba wheat, in store, Ft. William—including 2½c. tax—No. 1 northern, \$2.23½c.; No. 2 northern, \$2.20½c.; No. 3 northern, \$2.17½; No. 4 wheat, \$2.10½.

Oats.—(According to freights outside) Ontario, No. 2 white, 96c. to 97c., nominal; No. 3 white, 95c. to 96c., nominal. Manitoba oats, No. 2 C. W., 93½c. No. 3, C. W., 91½c. (in store, Fort William). Extra No. 1 feed, 89½c.; No. 1 feed, 86½c.

Barley.—Malting, \$1.65 to \$1.67.  
 Peas.—According to freights outside; No. 2, \$3.70 to \$3.80.

Corn.—American (track, Toronto), No. 3, kiln-dried, \$1.95.  
 Rye.—No. 2, \$2.03 to \$2.05.

Flour.—Manitoba flour (Toronto, new bags.) War quality, \$11.10. Ontario flour (prompt shipment, new bags), war quality, \$10.60, Montreal; \$10.60, Toronto.

**Hay and Millfeed.**

Hay.—Track, Toronto, No. 1, \$17 to \$18 per ton; mixed, per ton, \$14 to \$16.  
 Straw.—Car lots, per ton, \$8.50 to \$9, track, Toronto.  
 Bran.—Per ton, \$35.  
 Shorts.—Per ton, \$40; middlings, per ton, \$45 to \$46.  
 Good feed flour, per bag, \$3.40.

**Hides and Wool.**

Prices delivered, Toronto:  
 City Hides.—City butcher hides, green, flat, 15c.; calf skins, green flat, 20c.; veal kip, 20c.; horse hides, city take-off, \$5 to \$6; sheep skins, \$2.50 to \$5.50.  
 Country Markets.—Beef hides, flat, cured, 16c. to 17c.; deacons or bob calf, \$1.50 to \$2.25 each; horse hides, country take-off No. 1, \$6 to \$7; No. 2, \$5 to \$6; No. 1 sheep skins, \$2.50 to \$3.50; horse hair, farmers' stock, \$25.  
 Tallow.—City rendered, solids, in barrels, 13c. to 14c.; country solids, in

barrels, No. 1, 12c. to 13c.; cakes, No. 1, 14c. to 16c.

Wool.—Unwashed fleece wool, as to quality, fine 60c.; coarse, 58c.; washed wool, 70c.; coarse, 65c.

**Farm Produce.**

Butter.—Creamery butter firmed slightly, selling as quoted below, wholesale: Creamery, fresh-made pound squares, at 50c. to 52c. per lb.; creamery solids, at 48c. to 49c. per lb.; dairy, 35c. to 40c. per lb.

Oleomargarine.—32c. per lb.

Eggs.—Cold storage eggs again firmed slightly, wholesale: the new-laid variety selling at unchanged prices. New-laid, 65c. per dozen; cold storage, No. 1's 52c. per dozen; selects, 54 to 55c. per doz.

Cheese.—Cheese remained unchanged in price; Old cheese selling at 30c. per lb.; new at 24c. per lb., and new twins at 24½c. per lb.

Beans.—Beans advanced, as they are quite scarce. The Japanese hand-picked variety selling at \$6.75 per bushel. Lima beans selling at 16½c. to 17c. per lb.

Honey.—Honey is practically off the market. The comb selling at \$3.25 to \$3.75 per dozen.

Poultry.—Poultry firmed slightly in price during the week. The following prices being quoted for live weight: Chickens, milk fed, per lb., 26c.; chickens, ordinary fed, per lb.; 23c.; fowl, 3½ lbs. and under, per lb. 22c.; fowl, 3½ lbs. to 5 lbs., per lb. 25c.; fowl, 7 lbs. and over, per lb., 28c.; ducklings, per lb. 24c.; geese, per lb., 18c.; turkeys, young, per lb., 25c.; turkeys, old, per lb. 22c.

**Montreal.**

Prices are generally steady at \$225 to \$275 each for heavy draft horses, weighing 1,500 to 1,700 lbs., while the light draft, weighing 1,400 to 1,500 lbs., have brought \$175 to \$225 each. Small horses brought \$100 to \$175, and culls \$75 to \$100 each, while choice saddle and carriage horses were \$175 to \$225 each.

Poultry.—Demand for poultry is excellent, and many were of the opinion that prices are relatively lower than those of meat. Supplies, however, were light and the tone of the market firm. Turkeys were quoted at 35c. to 36c. per lb.; choice chickens at 35c.; and good at 30c. to 33c. Good fowl 27c. to 30c., and ordinary as low as 24c. Ducks 26c. to 30c., and geese 24c. to 28c.

Dressed Hogs.—Dressed hogs were in good demand at steady prices, namely, 27½c. to 28c. per lb. for abattoir, fresh-killed stock, and 25½c. to 26c. for country dressed.

Potatoes.—The weather having moderated somewhat during the past few weeks, supplies have continued to arrive, and prices show little change. Green Mountain potatoes were quoted at \$2.10 and \$2.15 per 80 lbs., ex-store, while Ontario whites were \$2 to \$2.10, and red, \$1.90 to \$2.00.

Honey and Maple Syrup.—Preparations are being made for the syrup crop, and supplies have practically disappeared. Quotations were nominally \$2 for 13-lb. gallon tins. Sugar was about 20c. per lb., but there was small demand. No. 1 white clover comb honey was 21c. to 22c. per lb., and No. 2 was 19c. to 20c., which was also about the range for brown clover comb. White extracted was 18c. to 20c.

Eggs.—American eggs are beginning to break into the market, but prices still continued around the top. Fresh-gathered were quoted at 68c. to 70c., wholesale, and cold storage select stock was 52c. to 54c.; No. 1 stock, 48c. to 50c., and No. 2, 45c. to 47c. With further mild weather, the market will surely ease off.

Butter.—The market for creamery was very firm, and prices showed an upward tendency. Finest fall makes advanced slightly, at 50½c. to 51c. per lb., with a range of 1c. below for fine quality. Current receipts range from 47½c. to 48½c., and dairies from 41½c. to 42c.

Cheese.—Commission prices were 21½c. for No. 1 cheese, 21¼c. for No. 2, and 20¾c. for No. 3.

Grain.—The market for oats was firmer, and prices were 1c. or so higher, with No. 3 Canadian and extra No. 1 feed quoted at \$1.10 to \$1.11 per bushel, ex-store; No. 1 feed, \$1.08 to \$1.09; No. 2 feed, \$1.05 to \$1.06; Ontario No. 2 white, \$1.09; No. 3, \$1.08, and No. 4, \$1.07 per bushel.

Flour.—Standard spring wheat Manitoba flour was quoted at \$11.10 per

Incorporated 1855

**Farmers Who Call**

at any of the Branches of  
**THE MOLSONS BANK**  
 are always made welcome.

Especially at this time when increased production is so essential, our Managers will cheerfully discuss with farmers their financial situation.

Savings Department at all Branches  
 Interest at Highest Current Rate

barrel, in bags, f. o. b. cars, Montreal for shipment to country points, and at \$11.20 to city districts, delivered, and 10c. more in broken lots. Ontario winter wheat flour was firm at \$11.10 to \$11.50 per barrel, in bags. Rye flour was quoted at \$5.90 to \$6 per bag.

**Chicago.**

Cattle.—Beeves, \$8.75 to \$14.15; stockers and feeders, \$7.50 to \$10.90; cows and heifers, \$6.60 to \$11.90; calves, \$8.75 to \$14.25.

Hogs.—Light, \$16.90 to \$17.50; mixed, \$16.90 to \$17.50; heavy, \$16.50 to \$17.50; rough, \$16.50 to \$16.75; pigs, \$12.75 to \$16.25.

Sheep.—Native, \$10 to \$13.25; lamb's native, \$13.50 to \$16.75.

**Cheese Markets.**

New York, specials, 26c. to 26½c.; average run, 25¼c. to 26c.; Montreal finest westerns, 21¼c.; finest easterns, 21¼.

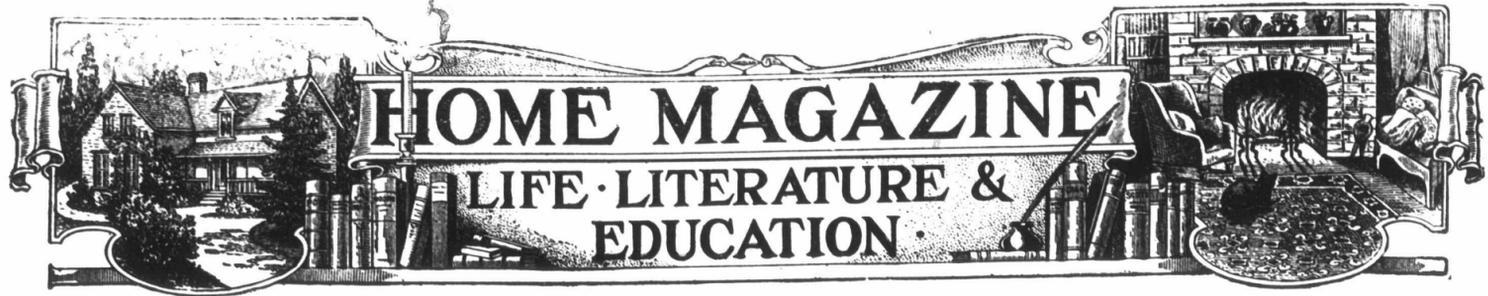
Volume 25 of The Clydesdale Stud Book of Canada is now ready for distribution and may be obtained on application to John W. Brant, accountant, National Live Stock Records, Ottawa. Stallions in this book number from 17420 to 18572, and mares from 35690 to 37743.

In a reader in February 14 issue, calling attention to L. K. Weber's auction sale of Shorthorns, the date of sale should have read March 7. Mr. Weber is leaving the farm, and it is an opportunity for anyone to secure good foundation stock or a herd header. Write L. K. Weber for catalogue and plan to attend the sale at his farm, Hawkesville, March 7.

W. J. Cowan of Cannington, Ontario, is offering by public auction at his farm on Thursday, March 7, a number of Imported Clydesdales, including stallions, mares and geldings, also his herd of Aberdeen-Angus cattle, comprising some choice cows in calf besides heifers and young bulls. There are also grade cattle in the offering among which are 20 grass steers besides a number of choice cows which are in calf. Train leaves Toronto at 8 a.m. and the farm is reached by midland division G. T. R. Connections are such that parties attending the sale may arrive in Toronto at 8.30 p.m. See advertisement in another column of this issue and write W. J. Cowan, Cannington for further particulars.

**Making Maple Syrup**

The appeal of the Food Controller to produce large quantities of maple sugar and syrup this spring should receive a ready response from those who have groves of maple trees. While maple sugar can be made as it was in the early days of settlement, with very simple apparatus, the work is greatly reduced and better products made when a modern equipment is utilized. For the instruction of those not entirely familiar with advanced methods, the Publications Branch of the Department of Agriculture at Ottawa has issued Bulletin No. 2-B entitled "The Maple Sugar Industry in Canada." By text and illustration it makes very clear the operation of a maple sugar plant. The time to tap, the utensils to use, the refining and handling of the product are all dealt with. This bulletin is available for distribution to those who apply for it.



### The Fire Divine.

By EDWARD WILBUR MASON

Who goes with song behind the plow  
Turning all day the soil,  
With bird that builds upon the bough  
He shares the joy of toil.

Who works with glee in the red glare  
Of forge or furnace flame,  
Has healthfulness and strength to spare,  
Tho' lacking wealth and fame.

Who sweeps a room with right good cheer  
Or weeds a garden close—  
Fate's insolence need never fear  
Companioned of the rose.

Who builds a moustrap or a song,  
Shaping with frenzy fine,  
He has a joy both sure and long—  
He has the fire divine!

—National Magazine.

### Seedcatalogueitis.

IT'S an epidemic that usually appears this time of year. One would think that it might at least wait for the first signs of spring, the louder shrieking of jays and crows in the evergreens, the gurgle of water under the snow, the undefinable something in air and sky that proclaims that the back of the winter is broken and that the growth-impulses are stirring in the trees. But no; be it the coldest day in January or the stormiest in blustery February the epidemic is likely to strike, full force, and the microbe is unmistakable.

Unmistakable because it almost shrieks its arrival. There is nothing insidious, and invisible, and slinking about it. Like all good things—for some germs are good and especially the one that gives rise to seedcatalogueitis—it is not afraid to brave the sunlight and sound its coming. And so it shouts its arrival—in color.

One day small boy comes running breathlessly from the rural post-box at the gate. "Look a' here!" he calls before he is well inside the house, and forthwith throws triumphantly on the table the first seed catalogue of the season in its blazing colors. Never grew such a rosy-red tomato on the green earth! Next to it, and small out of all proportion—because there is not room for one full-grown root, "let alone" a dozen, on a seed catalogue—is a gorgeous group of orange carrots, and crimson beets, and yellow squash, with some alluringly curled celery and cabbage in the background.

Flamboyant, to be sure. But never was a work of art more inspiring. Immediately the catalogue takes effect. From the small boy up the epidemic spreads instant. Outside the storm howls and snow blows high as the eaves—but inside there are visions of balmy days and gardens fairer than ever yet grew—veritable gardens of Allah, bathed in a radiance of amber light such as "never was on land or sea."

Eagerly, yet tenderly the leaves of the book are turned over and the accounts read of the finest, crispest, most delicious vegetables yet presented to the public. And everyone is happier. For it is a very salutary epidemic, this seedcatalogueitis, and augurs much for the woe folk who are determined not only to dream but to do.

And in being there are two things immediately to be done. The first is to spread merriment over the garden plot. If the earthing was not done last fall, as it should have been. The second is to order seeds right now from an absolutely reliable seed man. By putting the merriment on now it is time to make a note what and will be necessary to be worked into the ground this fall, until gardening time, when, indeed, the merriment is likely to be fatal to many of the plants and a most risky experiment. By ordering the seeds

right away one has the best possible choice and runs no hazard of being left without some of the varieties wanted.

As a rule the varieties praised in the catalogues are worth while; no reliable salesman can afford to spoil his reputation by recommending things that are of no use. But as a rule, also, it is best to keep to staples—the ordinary vegetables that are known to be worth while. Novelties—"vegetable peaches," etc.—may or may not be worth while, and yet it adds interest to get a small packet of seed of something quite unknown occasionally. If good one can invest again for the next year; if not one can try something else.

So order your seeds now, and when they arrive read carefully the directions printed on the packets—then follow them. It is not enough to prepare the ground and put the seed in; one must nurture and love the growing plants. There is nothing that will respond better to care and the loving touch,—almost as though the garden were saying: "You are caring tenderly for me; I will do the best I can for you."

There is every reason for growing vegetables, especially now when conservation is urged on every hand. They spare other food; they provide a certain amount of nourishment and the bulk necessary to obviate the evils that arise from too concentrated food; above all things they supply various salts, vitamins and mineral

matters absolute; needed to keep the body in health and good working order.

A fair variety is recommended, both for health and for interest. Besides the potatoes, corn, beans and turnips which can be grown in the field, it is not too much to say that every garden should contain beets, carrots, parsnips, cabbage, cauliflower, lettuce, celery, salsify, radish, onions, cucumbers, summer squash, marrow, tomatoes, garden cress and Swiss chard. If one wants to extend the list satisfactory additions will be Brussels sprouts, egg-plant, sweet peppers, artichokes and kale. It is to be remembered, however, that the egg-plant and peppers must be started almost at once, in the house or in a hot-bed (if one understands how to run a hot-bed properly), and that the kale must be left out in the fall until frozen before it is of use.

May you be caught by seedcatalogueitis, and speedily.

### Influence of School Gardens on Community Life.

[A paper given at the last convention of the Ontario Horticultural Association by Mr. J. A. Taylor, B.A., St. Thomas, Ont.]

MR. Chairman, Ladies and Gentlemen: I have no apology for bringing this subject before you to-

day, in as much as school gardens concern particularly our only asset—the rising generation. There never was a time in the history of the human race when such a premium was placed upon child life, as now. It is our children who will have to meet the frightful economic conditions created by this war, and it is on their shoulders that the war burden will fall. They are the trustees of posterity, and in as much as they are our only asset we should remove every handicap that hinders their physical, mental and moral development. The school garden helps to furnish an environment in which their characters are to develop and grow. Environment forms a large amount of life's course of study, and its enrichment makes noble tastes, refined ideas, elevated thoughts, lofty ideals, and sweetness of soul. A beautiful environment of flowers helps to correct the demoralizing tendencies of war and the battle-field. No one is unconscious of the soothing, soul-inspiring presence of flowers in the sick room and the death chamber. They grow as sweetly and in as great profusion over the grave of the poor as over the last resting place of the rich. They symbolize purity, beauty, innocence, sweetness, modesty, resignation and immortality. They are an imperishable type of evanescence. "To me," says Wordsworth, "the meanest flower that grows can give thoughts that do often lie too deep for tears." Later in life's journey when uttering regrets that his earlier life was not spent more in contact with nature, he says, "Nothing can bring back the hour of beauty in the grass and glory in the flower." And what is more beautiful than the following from the same author:

"For I have learned  
To look on nature, not as in the hour  
Of thoughtless youth; but hearing oftentimes  
The still sad music of humanity,  
Nor harsh, nor grating, though of ample  
power  
To chasten and subdue, and I have felt  
A presence that disturbs me with the joy  
Of elevated thoughts; a sense sublime  
Of something far more deeply interfused,  
Whose dwelling is the light of setting  
suns,  
And the round ocean, and the living air,  
And the blue sky, and in the mind of  
man."

So, too, Tennyson says:  
"Flower in the crannied wall  
I pluck you out of the crannies;  
I hold you here, root and all, in my hand,  
Little flower—but if I could understand  
What you are, root and all, and all in all,  
I should know what man and God is."

The shrieking shrapnel, the roaring cannon and the bursting shell chant the glorious requiem of Canada's fallen heroes and noble dead. The simple crosses and the beautiful poppies which grow over their graves proclaim alike the eternal verities for which they died, and whisper accents of rest and immortality. What soul has not had his patriotism quickened, refined, ennobled and inspired as he reads the beautiful and touching poem "In Flanders Fields"!

"In Flanders fields the poppies grow  
Between the crosses, row by row,  
That mark the place, and in the sky,  
The larks, still bravely singing fly,  
Scarce heard amid the drums below.

"We are the dead; short days ago,  
We lived, felt dawn, saw sunset glow,  
Loved and were loved, and now we lie  
In Flanders fields.

"Take up our quarrel with the foe!  
To you from feeling lands we throw  
The torch, be yours to hold it high!  
If ye break faith with us who die  
We shall not sleep, though poppies grow  
In Flanders fields."



Climbing Rose, Tausend Schon, Experimental Farm, Ottawa.

Kindly loaned by the Ontario Horticultural Association.

To many the truth continues Her greatness in which her grow to man the ivy-grown the bowers of place of Eng environment cording to Ge being deluged is the incong the German y The leaden s noted, its blea frequently fro absence of br tinuous cold, land, the col absence of flo the spirit and a sullen and currents of th of human kin

FOR many this an untiring check the ex centres. Citi riched and r the removal o the country t build up the country. Tre changes are a great struggle by the war is cause to a st passes, a migr rural districts. to find their Many more and open life longer endure life of the offi swell the ran diminish the r greatest nation have is a sta The ideal cou are given to r

A great cha and ideals o in the history when the con of religion are few nations a times come.

are no longer or regarded un-seen and realities. Be cannon rolls ideas, and the eternal. Lab son of the ric sleep in the other's meal and side by s Of all the in ducts of civil complex. Ol modern ones day as the o trained intell ditions which of yesterday. tually chan in the metho ple are alike, Each farmer salvation. T as one did ex financial suici and new ene cessful and i an adequate chemistry, zo bacteriology. to-date tiller quaintance w their life hist eradication; threaten the f ducts of his the soil in tl position and in order to r ravages, he r history and r

The funcio for complete citizenship, which equips responsibilities of abt of obs and many of the character A liberal edu ation fund an knowledge of at a soil phy

To many the secret of England's greatness continues a mystery. To her, honor, truth and fidelity are eternal verities. Her greatness is due to the environment in which her children are educated and grow to manhood. The thatched roof, the ivy-grown wall, the vine-clad hills and the bowers of flowers constitute the birth-place of English character, and is the environment in which it develops. According to Gerard the cause of the earth being deluged to-day with human blood is the incongenial environment in which the German youth is cradled and reared. The leaden skies for which Prussia is noted, its bleak cold winds which blow so frequently from the frigid Baltic, the absence of bright sunshine and the continuous cold, dreary rains, the low-lying land, the cold, damp climate, and the absence of flowers have tended to harden the spirit and rob it of its virtue, produce a sullen and morose character, chill the currents of the soul and curdle the milk of human kindness.

FOR many years the Governments in this and other lands have been untiring in their endeavors to check the exodus from rural to urban centres. Cities are constantly being enriched and rural districts weakened by the removal of the bright intellects from the country to the city. These help to build up the city at the expense of the country. Tremendous and far-reaching changes are already in operation. The great struggle for existence occasioned by the war is causing already, and will cause to a still greater degree as time passes, a migration from urban centres to rural districts. Many soldiers will return to find their positions filled with women. Many more accustomed to the active and open life of the trenches, will no longer endure the sedentary and close life of the office and factory. These will swell the ranks of the producers and diminish the numbers of consumers. The greatest national bulwark any nation can have is a stalwart farming population. The ideal country is one whose citizens are given to manufacturing and farming.

A great change has come over the ideas and ideals of life. There come times in the history of individuals and of nations when the consolations of conscience and of religion are all that are left. To not a few nations and many people, have these times come. Wealth, fame and pleasure are no longer found to be soul-satisfying or regarded as the ideals of life. The unseen and invisible things are the only realities. Behind the advance of the cannon rolls the irresistible march of ideas, and these alone are immortal and eternal. Labor is at last dignified; the son of the rich and the child of the poor sleep in the same trench, share each other's meals, endure common danger and side by side sleep in the same grave. Of all the industries which are the products of civilization, farming is the most complex. Old ideals are giving place to modern ones. Farming is regarded today as the one industry that requires a trained intelligence. The climatic conditions which obtain to-day, are not those of yesterday. The environment is continually changing, necessitating a change in the methods pursued. As no two people are alike, so no two farms are alike. Each farmer must work out his own salvation. To attempt to farm to-day as one did even ten years ago, would be financial suicide. Insects have multiplied and new enemies have appeared. Successful and intelligent farming requires an adequate and extensive knowledge of chemistry, zoology, physics, botany and bacteriology. The progressive and up-to-date tiller of the soil must have an acquaintance with his botanical enemies, their life history, habits and methods of eradication; with the bacteria that threaten the fruit of his labor and the products of his soil; with the chemistry of the soil in that he must know its composition and kind; with zoology because in order to cope with insects and their ravages, he must know their habits, life history and means of suppression.

The function of the school is to prepare for complete living and the duties of citizenship. It is to give that education which equips one for life's duties, responsibilities and opportunities. Accuracy of observation, clarity of thinking and soundness of judgment are the outstanding characteristics of a well educated man. A liberal education calls for a knowledge of the fundamentals of agriculture, a wide knowledge of the forces of nature, of soils and soil physics, of the habits of life

histories of plants, of drainage, of fungicides, insecticides and fertilizers. School gardens are the out-door laboratories where, through the medium of bodily activities, mental alertness and clarity of thinking are developed. They are the media through which progressive farmers are made aware of new grains, vegetables and fruits. By keeping the pupil constantly in an agricultural atmosphere, his mind is not diverted to other occupations. By combating the attacks of insects he sees the utter folly and absolute uselessness in keeping the domestic cat. Protection of bird life becomes not only a duty, but an imperative necessity. The man who destroys his cat helps more to win the war than the man who buys a Victory Bond, or starts a back-yard garden. In this connection I would earnestly advise the reading of that excellent work "The Value of Birds to Man" by James Buckland, in which he says "It is the nature of infamies as well as of diseases whose progress is not checked, to daily grow worse; and if the present-day wasteful and depraved practice of denuding the world of one of its most valuable natural resources—the birds—is not checked, there will be wrought a mischief, a universal disaster more awful in its results than words can express." Horticultural societies cannot be better employed than in promoting the growth and multiplication of school gardens.

\*[Lieut.-Col. John McCrae, who wrote "In Flanders Fields" was recently killed in the war.]

**Agriculture in the Schools.**

BY "THE OWL."

Paper IX.

WHILE it must be admitted that there are always some children in the country who have talents for something else rather than farming, and while it may be stated, almost as an axiom, that the curriculum and the school library should be broad enough to let each child—and the teacher of each child—know what he is good for, it may

nize all sides of the story, and keeps a watch on the little ones, aiming to put each in his proper place. Farming is a pleasant and independent life to the farmer who understands the science of it, loves the country, and can get along. The true teacher in a rural section will deem it her duty and privilege to present the attractiveness of it and try to make the countryside, so far as her sphere of influence extends, more attractive and more profitable than it might be without her and her work.

"If the country teachers," an educationist has said, "will faithfully study and teach agriculture, they will in time cause the state to save millions and millions of dollars every year." Perhaps the statement is not extravagant, for even a woman teacher of real ability, with thorough technical training, can teach much about agriculture—about the preparation of the soil, the planting of seed, tillage, poultry care and dairying. And the good farmer in the section, instead of laughing at her efforts, should try to help and encourage her in every way, even to the extent of giving a talk himself to the children from time to time. He should remember that she is dealing with children, not adults, and that the school garden cannot compete with his 200-acre farm. He should recognize that it is but the kindergarten of farming, but just as important, so far as it goes, as his own work.

I think, perhaps, the young women in our rural schools in Canada have not yet generally realized the possibilities, or been given the encouragement in agriculture that they need. A. E. Winship, in an address at the Department of Superintendence (U. S.), this year stated, "I know women teachers who made all the way from \$80 to \$200 on the school property besides having poultry and eggs"—the money, it is to be hoped, but a tangible evidence of the real education in agriculture that the children were getting while making it. For in all such effort the education is the thing that should be kept uppermost, the money being but a secondary consideration. Five acres, Mr. Winship considered, is

chrysalids, and identification of woods. Occasionally a Babcock tester may be borrowed or rented for demonstrations in milk testing. The building of bird-houses may be made at once the occasion for lessons in manual training and instruction in regard to the economic value of birds. Later wild-flower days and trips to the woods may afford a chance to teach love for the flowers and protection of them, and so may be checked the ruthless vandalism which threatens to make many of our wild flowers extinct as the dodo. Midsummer and fall will bring the time for collections of insects, weeds and weed-seeds, the last-named being carried into the winter when the pupils become absorbingly engaged in picking out from samples of grain the weed-seeds, naming and listing the varieties discovered.

From time to time, too, the Agricultural Representative for the district may be invited to give a lecture or conduct a demonstration. This placing of Agricultural Representatives has been a fine development of recent years in Canada. True, an occasional representative has proved a failure, but that has been an individual fault, not the fault of the system. As a rule, these young men, equipped with the scientific training of the agricultural colleges, have been a great help to the communities in which they have been placed, and individually, to every farmer who has chosen to make use of them.

AFTER the start in agriculture in the rural school, the boy who is to be a farmer needs more. As yet the agricultural courses in our high schools have not reached the pinnacle of usefulness which is possible, but they are aiming that way. Of the Agricultural College at Guelph it is unnecessary to speak. It has already won a world-reputation. Students have come to it from everywhere—from the Argentina, India, Japan, and from almost every country in Europe. Younger, but not less effective in their sphere of usefulness, are the similar colleges at St. Anne de Bellevue, near Montreal; Truro, N.S.; and the galaxy of Western colleges: the "M. A. C.," near Winnipeg, and the schools at Edmonton, Saskatoon and Vancouver.

As the necessity for agricultural education for the farmer-in-ordinary is more clearly recognized the sphere of these colleges is bound to extend, their membership—now so sadly depleted because of the war—must again increase in numbers. The time is coming when every farmer will be sure of an agricultural education, as a specialist, on top of his other schooling. That day may be in the far future but it must come, for every year adds to the scores of the expert and leaves the laggard and the ignorant farther behind. When the eyes of the public are open to this the aim will be to make every man in the rural districts an expert.

**Coffee—In a Jam Tin.**

Night. A torn night, full of the vicious glory of star shells and the giant horse-play of a back area barrage. Night, with more work to do than day, and no light to do it by, except what Fritz gives out of pure malice.

Up the rough roads that are gullies of mud and shell holes, creak the water wagons, bringing drink to the men in the forward trenches. Every unexpected lurch means precious water lost, and so much less for Private Johnny Canuck on which to live through to-morrow.

There! That's as far as the wagon goes. Now for the cans. More loss of course in the transfer. More loss again as the cans go down the trenches and each man's bottle is filled. Nevertheless, no matter how little is left, it's all that Pte Johnny will have to wash in, to drink, for twenty-four mortal hours. His thirst will be as big as all outdoors, owing to the tension on which he lives, moment by unknown moment. If he falls, wounded in some mad dash into No Man's Land, that thirst will grow to hideous, unbelievable proportions. But the water bottle is just the water bottle, holding about four glasses.

Sometimes there are unlooked for accidents so that it doesn't get the chance to hold anything to speak of. A wagon gets caught by Fritz—is overturned on a bad bit of road—springs a leak.

"Twenty-six men," said a lieutenant recently, "and a full half-pint of water



Milk Testing in a Rural School, Wisconsin.

be stated, quite as emphatically, that no teacher should be engaged in a rural school who does not know the real beauty that may be in country life, who does not understand fully the principles of agriculture, and who is not fully aware of the importance of agriculture in the economy of the world.

Put into a rural school a girl of eighteen or twenty to begin with, who "just hates the country," is thinking most of the time of her "young man" in the city, and spends her time waiting impatiently for salary-day and holidays—and what is she going to do with the rural school? Unconsciously she will put some of her own attitude of mind regarding the country into the children, and this at the most formative period of their lives. Unquestionably she will prove one of the most potent factors in that section in creating an interest that will eventually drive boys and girls who might make good farmers and farm girls to seek very different spheres of life in the town. . . . Very different, also, from the true teacher, whether from city or country, who recog-

about the right allowance for a large rural school, and, where the teacher is a married man or where two women teachers are employed, he would add a comfortable cottage and poultry-yard.

Very good work, however, can be done with a plot much smaller than this, say half an acre of land in addition to the playground. Indeed, another educationist, Mr. H. N. Goodard, of the Department of Education, Madison, in an article in the Journal of Education, warns emphatically against having too large a plot, considering that better educational results, if less money, can be obtained from a small area. It would be interesting to hear what those who have looked into the matter in Canada have to say on the subject, and discussion is invited. Possibly, as in most other things, the methods must vary with the locality.

In addition to the school garden the alert rural teacher will see endless opportunity for work "flavored rurally," at every season of the year. Before planting time will come experiments in seed-testing, the hatching of cocoons and

for the bunch. But we got through somehow."

"Four days," said a major writing home, "they were four days in that trench before they were relieved. And they hadn't had a drop to drink in all that ghastly eternity. Their tongues were so swollen they couldn't talk."

Something to drink—"anything wet"—the most precious possession of the man at the Front who has it; or the bitterest dream of the man who hasn't.

The one agency capable of reinforcing the meagre Army supply—of replacing the mere water with tea, coffee or cocoa for the men going into or coming out of the trenches—is the Y. M. C. A.

We all know some of the "Y's" other War-area activities. The "Y" distributes over a million sheets of free notepaper every month on which are written the 30,000 letters that go out of the Red Triangle Huts in England and France every day, to relatives in Canada who would rather have those scrawled, blotted chronicles of Pte. Johnny's share in the Great War, than bank drafts or invitations to Buckingham Palace. The "Y" spent \$25,000 on a single order for baseball goods for its great behind the lines sports events. The "Y" distributes 140,000 magazines every month—spends \$1,000 a month on concerts for the boys in England alone—provides 100 pianos, 300 gramophones, 27 moving picture machines—holds uncounted religious services and sing songs for the men in rest billets and training camps abroad.

But the drinks are the most appreciated of all the things that the Y. M. C. A. has found to do. Picture 75,000 cups of coffee in a line. That many cups go out over "Y" counters every day to our boys. Only, in the forward areas, the counter is just as apt to be a dilapidated ex-barn-door, and the cups are jam tins, with the punched-out, turned-back covers for handles!

Wouldn't you love to be there to help—you, Mrs. Canadian Farmer? Maybe you'd see your own boy reaching out for a cup, some grim day at the end of a big and bloody "show"—grey-faced, mud-caked, unutterably weary—but you'd know him—oh just wouldn't you! And how you'd thank God for the steaming coffee you had for him. This, if he were returning unhit from that inferno of the Hun.

But if he were wounded—if his eyes could just see and his ears could just hear—and all the rest of his strength had to go into the effort to walk, step by shattered step, to the hospital.

What if, just as his hand came out, reaching for the cup that he wanted more than he wanted life, a voice said:

"Sorry, but there's no more. It's all gone. The people in Canada forgot, this month."

No, you couldn't stand it. And yet, since the Y. M. C. A. estimates for this year call for \$50,000 for free coffee alone, many boys will have to hear it if we don't all do our part. The women—you and I and our next door neighbor—have been asked to give half of that fifty thousand.

Give—how? Haven't we turned our poor little purses inside out until there isn't so much as a postage stamp left?

The women in England thought they had given their last penny until some one hit on "The Silver Thimble Fund." Then, all over the country, women searched out old thimbles, odd earrings, gold rings—things they'd thought not worth giving away because they were broken, things they'd thought too precious to give away because they drew old memories after them, and dreams were caught in their tarnished curves.

One hundred and twenty-five thousand dollars in one year—yes, that was what came out of broken metal, and the English women's love that gave it.

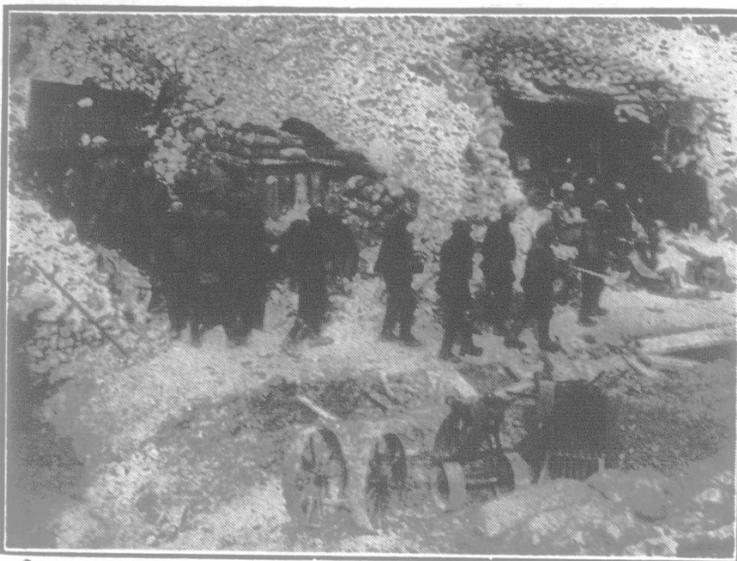
Canada is starting to raise its \$25,000 for the "Y" free coffee stalls by a "Silver Thimble and Trinket Fund", under the leadership of the Ontario, the Nova Scotia and the Saskatchewan W. C. T. U. If you live in one of these three provinces and your local W. C. T. U. isn't taking the matter up—or if there is no such organization in your neighborhood—don't you want to start the movement yourself? Or—if you're too busy to do more than collect the contributions of yourself and a few friends—don't you want to help to that extent?

Here is a list of articles that can be used: old gold or silver thimbles, brooches, chains or links of chains; scarf pins; gold or silver tops of canes, umbrellas, bottles; bracelets, rings and ear-rings silver match

boxes, old gold or silver watches, odd cuff links, studs, watch charms; broken spoons, forks or toilet articles in sterling silver; coins in gold or silver which have been monogrammed or punched. Anything sent in which would be of more value as it stands than as mere metal, will be sold intact. The rest will be melted down and turned into coinage.

Here are the ladies to whom contributions should be sent and from whom information may be had—President, Patriotic Board, Ontario W. C. T. U., Ontario—Mrs. May R. Thornley, 843 Dundas St., London; Nova Scotia—Mrs. Ada Powers, Pres. Prov. W. C. T. U., Lunenburg, N. S.; Saskatchewan—Mrs. H. E. Armstrong, Pres. Prov. W. C. T. U., 2312 Cornwall St., Regina, Sask.

title I have chosen for our talk to-day. I like inspiring titles. I think we usually go forward better when following an ideal than when trying to avoid evil. But the Bible contains many solemn warnings, as well as glorious ideals, and "forewarned is fore-armed—we might not have known the danger of lukewarm religion if Christ had not rebuked the church of the Laodiceans for being self-satisfied and easy-going. The members of that church were settling down comfortably to sleep. This was their dangerous idea: "I am rich, and increased with goods, and have need of nothing." But He who loved and pitied them aroused them with the startling words: "Thou art wretched, and miserable, and poor, and blind, and naked."



Y. M. C. A. Dugout.

This dugout, for men going to the trenches, was subsequently blown up, and two of the secretaries were killed.

## Hope's Quiet Hour.

### Half-Hearted Christianity.

These things saith the Amen, the faithful and true witness, the beginning of the creation of God.

I know thy works, that thou art neither cold nor hot: I would thou wert cold or hot. So then because thou art lukewarm, and neither cold nor hot, I will spue thee out of my mouth.—Rev. 3: 14-16.

A few days ago a man said to me: "I never go to church, but my conscience tells me I am all right, so I am not afraid to die and appear before God."

I answered: "The conscience of the Pharisee told him he was all right—he was not afraid to appear before God—and Saul of Tarsus was convinced that he was serving God when he was trying to kill the Christian Church."—See S. Luke 18: 11; Acts 26: 9.

To feel that one is all right is no proof of safety. The church described in our text was perfectly satisfied with its spiritual condition; yet its Master and Judge said that He would have nothing to do with it, unless it renounced pride



Dugout for Wounded.

Dugout for walking wounded coming out of the trenches.

"Keep your heart and soul on fire, Do not falter, do not tire, Don't grow weary in well-doing, To your better self be true.

Keep your feet out of the mire, Keep on climbing, higher, higher! To the topmost peak aspire, God wants soldiers who'll go through."

I am not in the least satisfied with the

and came humbly to Him for the true riches, the white raiment of righteousness and the power of spiritual vision.

It is said that General French's comment on a certain battle was: "The Germans were as much spent as we were, and we were as exhausted as they were. It was the last ounce of heart that told." Because our soldiers put "heart" into their struggle they won the battle.

The Pharisee pointed to his religious acts and was satisfied to stand still. The publican was ashamed of his past life, and put his whole strength into the desire to be better. So—while the respectable professor of religion spent his time in admiring his own goodness—the earnest-hearted publican put his hand in God's, and received mercy for the past and strength for the future. It is "heart" that tells. Christ demands enthusiastic service. In this age—as in all other ages of history—the "publicans and sinners" (those who are in no danger of being satisfied with themselves) are more likely to press through obstacles to the Saviour they need, than the respectable, self-satisfied "Pharisees"—those who think they can save themselves.

There are some people, in this age, who call themselves "publicans", yet stand in the Pharisee's position. They say: "I am thankful I am not like those religious hypocrites. I don't pretend to be good. I make no profession of religion."

That is to combine the sins of the publican with the self-satisfaction of the Pharisee. It is like taking a spiritual opiate, to admire oneself for one's "good" deeds; but it is like taking poison, to admire one's sins, knowing them to be sins.

A writer in "Saturday Evening Post" declared that the "crucifixion of Belgium" was a tremendous advertisement of the horror of evil-doing. The murder of a whole nation was written up on "a billboard as high as the world"; and the soul of the world was awakened instantly. "The world was flooded with vision in a night. Four hundred million men became prophets in a night. We saw God, we saw right and wrong with a shout. We cheered for God. . . We saw with one look hell and heaven opened up side by side, and the soul of the world made its plain choice forever."

We are made in the image of God—how can we help turning from evil with loathing, when we see its awful ugliness plainly revealed? But lukewarmness in religion hides selfishness and unreality under a respectable disguise. The Bible is full of warnings against the comfortable idea that we are all right if we "do no harm." The rich man in the parable thought he was doing no harm, and it was a great surprise to him when death opened his eyes. He had lived for himself only, the world was no better because of his life. He was a barren fruit-tree, yielding no fruit.

Yesterday morning I woke with the message ringing in my ears: "Whatever He saith unto you, do it!" Then I remembered how those willing servants in Cana obeyed that command. When our Lord told them to fill the waterpots with water, they filled them "up to the brim." There was nothing half-hearted about their service. Do we fill our days and years "up to the brim" with the service of our Master? Is our everyday work consecrated to Him? Do we take our rest at His feet? Do we put "heart" into our service, gladly placing ourselves at His disposal?

Christianity should make our faces shine with joy. The fruit of the Spirit is "Joy" as well as "Love". But there is no joy in half-hearted service. There may be comfort and self-satisfaction, but joy is a word in an unknown tongue to one who gives God a second or third place in his life. He doesn't understand the word and he doesn't believe in it. He is like a confirmed thief who think that no one is honest, or a confirmed liar who thinks no man's word can be trusted.

We never reach a position where we can safely stop. On this side of death, at least, we shall never succeed in loving God perfectly and our neighbor as ourselves. We must press on—"carry on", as the soldiers say—trying to follow Him Who perfectly fulfilled the will of the Father. While we fall so far short of the standard set before us it is impossible to be satisfied, or think we have already attained our object—if our eyes are fixed on His beauty of holiness. Our Lord's command is to "strive" to enter in at the narrow gate, for many will "seek" to enter in and shall not be able. Again He says: "The kingdom of heaven suffereth violence, and the violent take it by force." St. Paul says we should run the Christian race as strenuously as an athlete, who knows that only one can receive the prize and intends to be that one.

Are we as enthusiastic as that? Is our Master's service the real business of our lives, or do we serve Him only when doing

# GROW BEETS

## More Money in Beets than in Oats, Barley or Corn

**C**ROP production in Canada *must* be increased. This is as true of sugar beets as of anything else the farmer grows. We *must* relieve Canada of all danger of sugar shortage, and we *can* do so if the farmers of Ontario will co-operate with us. We have

the necessary equipment in our big refineries at Chatham, Wallaceburg and Kitchener. We can do *our* part if the farmers do *theirs*. We *are* doing our part by offering for beets this year the highest price ever offered and by giving all possible assistance to the farmer.

### We Supply Fertilizer at Cost.

With the proper fertilizer, you can obtain a big yield of beets per acre. Now it is the combination of quality *and* quantity that means profitable beet cultivation. We pay considerably more per ton for beets containing 18% sugar than we do for beets containing 12% sugar, if contracted for on percentage basis. Big yield plus high quality means a business in beets so profitable to the farmer that he cannot fail to realize the importance of our "fertilizer at cost offer."

### Selling Seed at half what it costs us.

In order to place every possible advantage at the disposal of our growers, we supply the best quality beet seed at half-cost. Where the farmer needs extra help for the cultivation of his crop, we endeavor to find the labor for him. In fact we do everything possible to make it *easy* to grow beets.

### Beet Growing Helps Succeeding Crops.

If you use artificial fertilizer as supplied by us, the beets do not use up all the plant food contained in this fertilizer. Consequently, the yield of succeeding crops is increased as well. Beets properly cultivated will leave your land clean and in excellent condition for other crops.

We have agreed to pay this year for Sugar Beets (on a "flat" basis)

## \$9.00 per Ton to our Growers

and more if the net wholesale price of sugar rises above \$8.00 per 100 lbs. The Grower has the alternative of contracting with us on a "percentage" basis. In that type of contract, we agree to pay at the rate of \$8.75 per net ton—for beets containing 12% of Sugar—with substantial increase when sugar content is over 12% (last year's percentage was "over 16%").

### WHAT OTHER FARMERS HAVE MADE OUT OF BEETS

We have on record the results obtained by the farmers who supplied us with beets last year; and will send you these figures. Some of our growers averaged as high as \$136 profit, gross, per acre.

You can count on a good profit per acre. You can reasonably hope for a big one.

Can you pass up this very real opportunity? The world is hungry for sugar. The shortage is so great that the advantage is all with the farmer. *You can help out in this crisis. You can help us meet the sugar emergency at great gain to yourself.* Act to-day. Get full particulars. Use the coupon below.

### Read this Opinion of an Expert.

[From an address by the late Dr. C. C. James, Dominion Government Agricultural Commissioner.]

"There is no crop which, properly handled, will prove more profitable to the farming community than sugar beets. Sugar beets are a crop that take almost *all* from the air and from the rain, and very little from the soil. If the tops are left in the field there is practically no exhaustion. In that they differ from grains, which take *much* from the soil. It is a good sign that this industry is spreading in Canada. We have been importing from 12 to 15 million dollars worth of sugar that we might just as well be producing ourselves here at home."

### Once a Beet Grower, always a Beet Grower.

Mr. R. H. Abraham, near Chatham, was one of the first Ontario farmers to grow Sugar Beets. Read what he says: "One season I had sugar beets in one part of a field and oats in another. All the land in that field was of uniform quality. Next year it produced a crop of wheat, and the line where the beets ended and the oats began the year before, was as clearly marked as if measured off with a tape line. The beet land gave six or seven bushels more per acre in wheat than did the land which had been in oats. The beet crop is profitable in itself. In 1916 the average yield in Kent County was 14 tons per acre. On plenty of farms a yield of 20 tons was obtained."

## DOMINION SUGAR COMPANY, Limited

Head Office, 123 Tecumseh Road, Chatham. Refineries at Chatham, Wallaceburg, Kitchener

Sign the attached Coupon and send it to us to-day. Act quickly, as the beets must be planted now for this year's crop.

Dominion Sugar Co. Limited, 123 Tecumseh Road, Chatham.

Send me Contract Form and full particulars regarding Beet Growing.

Name.....

Address.....

Any land that will grow a good crop of corn, wheat, or oats will grow a profitable crop of beets.



### One Egg and One Extra Level Spoonful of Egg-O Baking Powder

EXPERT cooks have proven that this is the solution of the egg question. Careful tests have shown that there is no loss in the quality or deliciousness of food prepared the Egg-O way.

THE necessity for war-time economy makes it most desirable for every housewife to use Egg-O Baking Powder. Less Egg-O is required and the results are better.

HOME-MADE bread and cakes are vastly superior to the baker's, both in taste and food value. Every housewife knows this, but many hesitate, fearing failure.

EGG-O is so sure that it practically eliminates the possibility of failure. If you don't bake regularly you will enjoy the Egg-O way. If you are an expert you will appreciate the quality of Egg-O Baking Powder.

GET a tin from your grocer with your next order. Buy the pound size or larger—it's much cheaper.



Send for our free recipe book.

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TORONTO



Mr. Wm. Proudfoot, Liberal leader, has given notice that he will move in the Ontario Legislature the introduction of a Bill to remove the disqualification of women as candidates for the Legislative Assembly. In British Columbia one woman and in Alberta two women have already been elected to the Provincial Parliament.

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what we consider "religious" work—devoting part of each Sunday to Him and living for ourselves six days out of seven?

We know that it is impossible to serve two masters and God will not accept a second place in our hearts. Half-hearted Christianity—the lukewarmness which has not yet been eradicated from the church—seems to please Christ even less than open opposition. He says: "I would thou wert cold or hot. So then because thou art lukewarm, and neither cold or hot, I will spue thee out of my mouth."

"He who does not advance falls back, he who stops is overwhelmed, distanced, crushed; he who ceases to grow greater becomes smaller; he who leaves off, gives up," says H. F. Amiel.

If there was one thing more than another that roused the indignation of our Lord as He walked among men, it was surface religion. Over and over again He denounced "hypocrites," and a hypocrite meant an actor—one who was only doing his actions for the sake of men's approval. A religion which does not come from the heart can never deceive or please God. When Jenny Lind was asked the secret of her power as a singer, she said: "I sing unto God." Is not that the service God wants of each of us? We may not be able to make music with our voices, but we can all sing and make melody in our "hearts" unto the Lord. It is the heart that counts. Our service will not be of any value unless we serve willingly.

"God wants soldiers who'll go through."  
DORA FARNCOMB.

### Current Events

By the Military Service Act, up to Feb. 20th, 21,978 men had been secured in Canada, including 1,227 Imperial recruits.

The United States is planning to draft 100,000 men monthly for the army.

While raids and air-fights continue on the West Front, where, before long, the greatest battle in history is likely to be fought, the interest of the world still centres on Russia, where the Bolsheviki have evidently brewed a broth that may mean the utter disruption and dismemberment of a great nation. The confusion and ruthlessness which marked the establishment of their Government served only to divide Russia into factions. The Ukraine formed itself into a Republic and formed a separate peace with the Teutons. Finland engaged in bitter resistance to the Red Guards.—And at the conclusion of the Brest-Litovsk parleys, the Bolsheviki, while refusing to sign a formal peace with Germany, ordered the army to demobilize. Subsequently Foreign Minister Trotsky sent a wireless to Chancellor von Hertling, accepting the German peace terms, following this up by dispatching an envoy to conclude the matter formally. But this evidently did not suit the Germans who were already on the warpath in Esthonia. At time of going to press it is stated that they have captured Lutsk, Minsk and Dvinsk, and have now a clear road to Petrograd. In the meantime Trotsky and Premier Lenine, have signed a treaty giving over a great part of Russia to the Germans. Everywhere guns and provisions have been abandoned to the enemy. . . . What may be the outcome of all this is impossible to hazard. Greater Russia may oppose a sort of guerilla warfare, and it is said that in Siberia numbers who are still loyal to Kerensky may offer opposition to the Teutons. More significant is the possibility that Japan may enter the war, to forestall any possibility of Teuton power at Vladivostok. . . . The German peace terms, have, it is said, been greatly increased in severity since the first proposals which included retention by Germany of Poland, Lithuania, Riga and Moon Island, and an indemnity of £800,000,000. . . . In the Holy Land General Allenby's troops have again scored a victory, having taken Jericho and a great concrete bridge over the Jordan built by the Germans since the war began. This victory gives control of important roads.

### The Dollar Chain

Contributions to the Dollar Chain from Feb. 15 to Feb. 22 are: "A Helper", \$5.00; "Toronto", \$2.00; "Charity", \$10.00; Jas. Dobbyn, Shetland, Ont., \$3.50.

Previously acknowledged,.....\$5,220.40

Total to Feb. 22.....\$5,240.90

Kindly address contributions to The Farmer's Advocate and Home Magazine, London, Ont.

### The Fashions.

How to Order Patterns.

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this. See under illustrations for price of patterns shown in this week's issue.

Send 15 cents per number when price is not marked.

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9562 House Gown, 34 or 36, 38 or 40, 42 or 44 bust. Price 15 cts.

9556 Coat with or without Cape, sizes 16 and 18 years.

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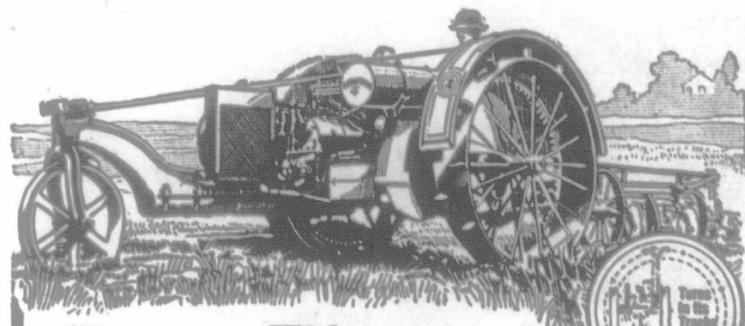
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Model A—8-16 H.P.      Model B—12-24 H.P.

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Size, weight, simple construction and ease of handling all prove to the most exacting farmer that here at last is the ultimate tractor for the farmer. For instance, Model B with 2000 pounds draw-bar pull does the heaviest of plowing easily with a weight of less than 4000 pounds. That means economy all around. Yet the machine is light enough to handle the harrows, drills, and seeders over soft ground without packing the soil.

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## The Windrow

The first concert by the Mendelssohn Choir under its new leader, Mr. H. A. Fricker, was given recently in Massey Hall, Toronto.

Sir Thomas Lawrence's portrait of Sir Alexander Mackenzie has been bought in England for an ultimate place in Canada's gallery of her great men. Mackenzie in 1789 went up the river subsequently known by his name to the Arctic Ocean, and in 1793 ascended the Peace River, then crossed to the Pacific. He was one of America's greatest explorers.

Pte. Boucher, of Gananoque, Ont., lately returned from overseas after 8 months in the trenches, is 73 years of age. When in England on his way home he received special notice from the king. Pte. Boucher is a veteran soldier, having fought in the American Civil War.

## Serial Story.

### An Alabaster Box.

BY MARY E. WILKINS FREEMAN AND FLORENCE MORSE KINGSLEY.

By arrangement with McClelland, Goodchild & Stewart, Publishers, Toronto, Ont.

Chapter XVI.

The reason I spoke to you about Jim just now," said Fanny, "was because he's been acting awfully queer lately. I thought perhaps you knew—I know he likes you better than any of the other girls. He says you have some sense, and the others haven't.

"I guess that must have been before Lydia Orr came to Brookville," said Ellen, in a hard, sweet voice.

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J. H. Misner, Jarvis, Ont.

"Yes; it was," admitted Fanny reluctantly. "Everything seems to be different since then."

"What has Jim been doing that's any queerer than usual?" inquired Ellen, with some asperity.

Fanny hesitated.

"You won't tell?"

"Of course not, if it's a secret."

"Cross your heart an' hope t' die?" quoted Fanny from their childhood days.

Ellen giggled.

"Cross m' heart an' hope t' die," she repeated.

"Well, Jim's been off on some sort of a trip," said Fanny.

"I don't see anything so very queer about that."

"Wait till I tell you—You must be sure and not breathe a word, even to your mother; you won't, will you?"

"Fan, you make me mad! Didn't I just say I wouldn't?"

"Well, then; he went with her in the auto; they started about five o'clock in the morning, and Jim didn't get home till after twelve that night."

Ellen laughed, with studied indifference.

"Pity they couldn't have asked us to go along," she said. "I'm sure the car's plenty big enough."

"I don't think it, was just for fun," said Fanny.

"You don't? What for, then?"

"I asked Jim, and he wouldn't tell me."

"When did you ask him?"

"The morning they went. I came down about half-past four; mother doesn't get up as early as that, we haven't much milk to look after now; but I wake up awfully early sometimes, and I'd rather be doing something than lying there wide awake."

Ellen squeezed Fanny's arm sympathetically. She herself had lost no moments of healthy sleep over Jim Dodge's fancied defection; but she enjoyed imagining herself to be involved in a passionate romance.

"Isn't it awful to lie awake and think—and think and not be able to do a single thing!" she said, with a tragic gesture.

Fanny bent down to look into Ellen's pretty face.

"Why, Ellen", she said, "is it as bad as that? didn't suppose you really cared."

She clasped Ellen's slender waist closer and kissed her fervently.

Ellen coaxed two shining tears into sparkling prominence on her long lashes.

"Oh, don't mind me, Fan," she murmured; "but I can sympathize with you, dear. I know exactly how you feel—and to think it's the same girl!"

Ellen giggled light-heartedly:

"Anyway, she can't marry both of them," she finished.

Fanny was looking away through the boles of the gnarled old trees, her face grave and preoccupied.

"Perhaps I oughtn't to have told you," she said.

"Why, you haven't told me anything yet," protested Ellen. "You're the funniest girl, Fan! I don't believe you know how to—really confide in anybody."



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A number of individuals from this herd are in the London Consignment Sale, March 14. Look up the breeding of these in the catalogue.

For Particulars, Write

**I. N. Howe, Mossley, Ont.**

If you'd tell me more how you feel about him you wouldn't care half so much."

Fanny winced perceptibly. She could not bear to speak of the secret—which indeed appeared to be no secret—she strove daily to bury under a mountain of hard work, but which seemed possessed of mysterious powers of resurrection in the dark hours between sunset and sunrise.

"But there's nothing to—talk about, Ellen," she said; and in spite of herself her voice sounded cold, almost menacing.

"Oh, very well, if you feel that way," retorted Ellen. "But I can tell you one thing—or, I might tell you something; but I guess I won't."

"Please, Ellen,—if it's about—"

"Well, it is."

Fanny's eyes pleaded hungrily with the naughty Ellen.

"You haven't finished your account of that interesting pleasure excursion of Jim's and Miss Orr's," said Ellen. "Isn't it lovely Jim can drive her car? Is he going to be her regular chauffeur? And do you get an occasional joy-ride?"

"Of course not," Fanny said indignantly. "Oh, Ellen, how can you go on like that! I'm sure you don't care a bit about Jim or me, either."

"I do!" declared Ellen. "I love you with all my heart, Fan; but I don't know about Jim. I—I might have—you know; but if he's crazy over that Orr girl, what's the use? There are other men, just as good-looking as Jim Dodge and not half so sarcastic and disagreeable."

"Jim can be disagreeable, if he wants to," conceded Jim's sister. "When I asked him where he was going with the car so early in the morning—you know he's been bring the car home nights so as to clean it and fix the engine, till she can get somebody—I was surprised to find him putting in oil and tightening up screws and things, when it was scarcely daylight; and I said so. He wouldn't tell me a thing. 'You just 'tend to your own knitting, Fan', was all he said; 'perhaps you'll know some day; and then again, perhaps you won't.'"

"And didn't you find out?" cried Ellen, her dark eyes alight with curiosity. "If that doesn't sound exactly like Jim Dodge! But you said you heard him when he came in that night; didn't he tell you anything then?—You don't think they ran off to get married? Oh, Fan!"

"Of course not, you goose! Do you suppose he'd have come back home alone, if it had been anything like that?"

Ellen heaved a sigh of exaggerated relief.

"Be still, my heart!" she murmured.

"No; they went to get somebody from somewhere," pursued Fanny.

"To get somebody from somewhere," repeated Ellen impatiently. "How thrilling! Who do you suppose it was?"

Fanny shook her head. "I haven't the slightest idea."

"How perfectly funny! . . . Is the somebody there, now?"

"I don't know. Jim won't tell me a thing that goes on there. He says if there's anything on top of the earth he absolutely despises it's a gossiping man. He says a gossiping woman is a creation of God—must be, there's so many of 'em; but a gossiping man—he can't find any word in the dictionary mean enough for that sort of a low-down skunk."

Ellen burst into hysterical laughter.

"What an idea!" she gasped. "Oh, but he's almost too sweet to live, Fan. Somebody ought to take him down a peg or two. Fan, if he proposes to that girl, I hope she won't have him. 'Twould serve him right!"

"Perhaps she won't marry anybody around here," mused Fanny. "Did you ever notice she wears a thin gold chain around her neck, Ellen?"

Ellen nodded.

"Perhaps there's a picture of somebody on it."

"I shouldn't wonder."

Ellen impatiently kicked a big apple out of her way, to the manifest discomfiture of two or three drunken wasps who were battenning on the sweet juices.

"I've got to go back to the house," she said. "Mother'll be looking for me."

"But, Ellen—"

"Well?"

"You said you knew something—"

Ellen yawned.

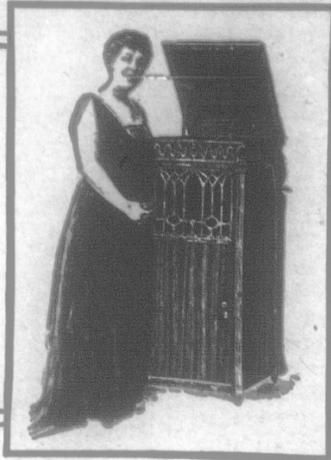
"Did I?"

"You know you did, Ellen! Please—"

"'Twasn't much."

"What was it?"

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"Oh, nothing, only I met the minister coming out of Lydia Orr's house one day a while ago, and he was walking along as if he'd been sent for—Never even saw me. I had a good mind to speak to him, anyway; but before I could think of anything cute to say he'd gone by—two-forty on a plank road!"

Fanny was silent. She was wishing she had not asked Ellen to tell. Then instantly her mind began to examine this new aspect of her problem.

"He didn't look so awfully pleased and happy," Ellen went on, "his head was down—so, and he was just scorching up the road. Perhaps they'd been having a scrap."

"Oh, no!" burst from Fanny's lips. "It wasn't that."

"Why, what do you know about Wesley Elliot and Lydia Orr?" inquired Ellen vindictively. "You're a whole lot like Jim—as close-mouthed as a molasses jug, when you don't happen to feel like talking. It isn't fair," she went on crossly. "I tell you everything—every—every single thing; and you just take it all in without winking an eyelash. It isn't fair!"

"Oh, Ellen, please don't—I can't bear it from you!"

Fanny's proud head dropped to her friend's shoulder, a stifled sob escaped her.

"There now, Fan; I didn't mean a word of it! I'm sorry I told you about him—only I thought he looked so kind of cut up over something that maybe—Honest, Fan, I don't believe he likes her."

"You don't know," murmured Fanny, wiping her wet eyes. "I didn't tell you she came to see me."

"She did!"  
 "Yes; it was after we had all been there, and mother was going on so about the furniture. It all seemed so mean and sordid to me, as if we were trying to—well, you know."

Ellen nodded:  
 "Of course I do. That's why you wouldn't let her have your furniture. I gloried in your spunk, Fan."

"But I did let her have it, Ellen."

"You did? Well!"  
 "I'll tell you how it happened. Mother'd gone down to the village, and Jim was off somewhere—he's never in the house day-times any more; I'd been working on the new curtains all day, and I was just putting them up in the parlor, when she came. . . . Ellen, sometimes I think perhaps we don't understand that girl. She was just as sweet—if it wasn't for—If I hadn't hardened my heart against her almost the first thing, you know, I don't believe I could help loving her."

"Fanny!" cried Ellen protestingly. "She certainly is a soft-soap artist. My mother says she is so refined; and Mrs. Daggett is always chanting her praises."

"Think of all she's done for the village", urged Fanny. "I want to be just, even if—"

"Well, I don't!" cried Ellen. "I just enjoy being real spiteful sometimes—especially when another girl gobbles all the men in sight; and I know I'm prettier than she is. It's just because she's new and—and stylish and rich. What made you give in about your furniture, Fan?"

"Because I—"

Fanny stopped short, puckering her forehead.

"I don't know whether I can explain it, Ellen; but I notice it every time I am with her. There's something—"

"Good gracious, Fan! She must have hypnotized you."

"Be quiet, Ellen, I'm trying to think just how it happened. She didn't say so very much—just sat down and watched me, while I sewed rings on the curtains. But the first thing I knew, I piped up and said: 'Do you really want that old furniture of mine so much?' And she said—Well, no matter what she said; it was more the way she looked. I guess I'd have given her the eyes out of my head, or any old thing."

"That's just what I told you," interrupted Ellen. "There are people like that. Don't you remember that horrid old what's-his-name in 'Trilby'?"

"Don't be silly, Ellen," said Fanny rebukingly. "Well, I took her up to my room and showed her my bead and bureau and washstand. There were some chairs, too; mother got them all for my room at that old auction we've heard so much about; I was just a baby then. I told her about it. She sat down in my rocking-chair by the window and just looked at the things, without saying a

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B. R. BARR, R. 1, Mossley, Ontario

word, at first. After a while, she said: 'Your mother used to come in and tuck the blankets around you nice and warm in the night; didn't she?'

"Why, I suppose she did," I told her. 'Mother's room is right next to mine.'

Ellen, there was a look in her eyes—I can't tell you about it—you wouldn't understand. And, anyway, I didn't care a bit about the furniture. 'You can have it,' I said. 'I don't want it, and I don't see why you do; it isn't pretty any more.' I thought she was going to cry, for a minute. Then such a soft gladness came over her face. She came up to me and took both my hands in hers; but all she said was 'Thank you.'

"And did she pay you a whole lot for it?" inquired Ellen sordidly.

"I didn't think anything about that part of it," said Fanny. "Jim carried it all over the next day, with a lot of old stuff mother had. Jim says she's had a man from Grenoble working in the barn for weeks and weeks, putting everything in order. My old set was painted over, with all the little garlands and blue ribbons, like new."

"But how much—" persisted Ellen. "She must have paid you a lot for it."

"I didn't ask mother," said Fanny. "I didn't want to know. I've got a new set; it's real pretty. You must come over and see my room, now it's all finished."

What Fanny did not tell Ellen was that after Lydia's departure she had unexpectedly come upon the photograph of the picnic group under a book on her table. The faded picture with its penciled words had meant much to Fanny. She had not forgotten, she told herself, she could never forget, that day in June, before the unlooked-for arrival of the strange girl, whose coming had changed everything. Once more she lived over in imagination that perfect day, with its white clouds floating high in the blue, and the breath of clover on the wind. She and Wesley Elliot had gone quietly away into the woods after the boisterous merriment of the picnic luncheon.

"It's safe enough, as long as we follow the stream," Fanny had assured him, piloting the way over fallen logs and through dense thickets of pine and laurel, further and further away from the sounds of shrill laughter and the smoky smell of the camp fire, where the girls were still busy toasting marshmallows on long sticks for the youths who hovered in the rear.

The minister had expressed a keen desire to hear the rare notes of the hermit thrush; and this romantic quest led them deep into the forest. The girl paused at last on the brink of a pool, where they could see the shadowy forms of brook trout gliding through the clear, cold water.

"If we are quiet and listen," she told him, "I think we shall hear the hermit."

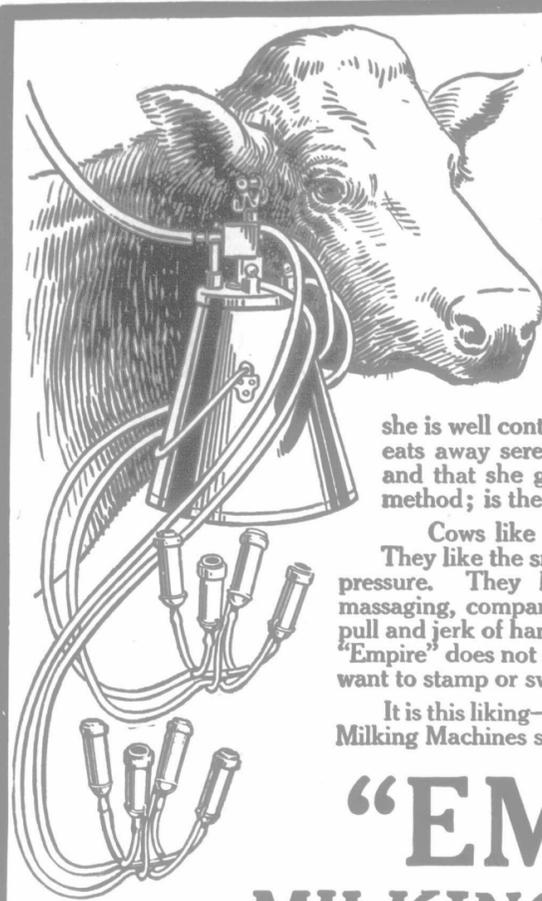
On a carpet of moss, thicker and softer than a deep-piled rug, they sat down. Not a sound broke the stillness but the gurgle of water and the soft sighing of the wind through great tree tops. The minister bared his head, as if aware of the holy spirit of solitude in the place. Neither spoke nor stirred; but the girl's heart beat loud—so loud she feared he might hear, and drew her little cape closer above her breast. Then all at once, ringing down the somber aisles of the forest came the song of the solitary bird, exquisite, lonely, filled with an indescribable, yearning sweetness. The man's eloquent eyes met her own in a long look.

"Wonderful!" he murmured.

His hand sought and closed upon hers for an instant. Then without further speech they returned to the picnicers. Someone—she thought it was Joyce Fulson—snapped the joyous group at the moment of the departure. It had been a week later, that he had written the words "Lest we forget"—with a look and smile which set the girl's pulses fluttering. But that was in June. Now it was September. Fanny, crouched by the window where Lydia Orr had been that afternoon, stared coldly at the picture. It was downright silly to have carried it about with her. She had lost it somewhere—pulling out her handkerchief, perhaps. Had Lydia Orr found and brought it back? She ardently wished she knew; but in the meanwhile—

She tore the picture deliberately across, thereby accomplishing unhindered what Wesley Elliot had attempted several days before; then she burned the fragments in the quick spurt of a lighted match. . . Lest we forget, indeed!

To be continued.



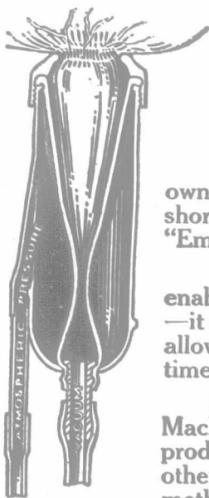
## The Cow is the EMPIRE'S Best Salesman

THE cow can't tell you, in words, why she likes the "Empire" way of milking—why she prefers it even to the most careful hand milking. "Actions speak louder than words." The fact that she is well content to be milked with the "Empire," that she eats away serenely as the "Empire" brings down the milk; and that she gives more milk than if milked by any other method; is the best proof that she likes the "Empire".

Cows like the way the "Empire" massages the teats. They like the smooth, even motion of the vacuum and air pressure. They like the steady regularity of "Empire" massaging, compared with suction, or the irregularity and the pull and jerk of hand milking. And, cows get to know that the "Empire" does not shout, or thump them on the side when they want to stamp or switch the tail.

It is this liking—this contentment—that makes the "Empire" Milking Machines show such excellent results.

# "EMPIRE" MILKING MACHINES



Teat Cup showing walls expanded.

are solving the hired help problem for thousands of farmers—reducing the cost of milk production—taking the drudgery out of dairying on hundreds of farms throughout Canada and United States,—why not on your farm?

An "Empire" Machine milks twenty to thirty cows in an hour; owners of smaller herds will finish their milking in a correspondingly shorter time. A ten or twelve year old boy or girl can operate an "Empire" Milking Machine without trouble.

The "Empire" is always on the job, and always ready—it enables the farmer to be practically independent of the hired man—it saves hours of valuable labor for other work each week—and allows him to handle a larger herd with a smaller investment of time, labor and energy.

Shrewd farmers and dairymen are installing "Empire" Machines, recognizing the need for, and profit in increased production of all farm produce. Shortage of labor and advance in other expenses makes economy and greater efficiency in operating methods necessary. You would install an "Empire" if you knew them as these farmers do.

We would like to send you our literature, without cost or obligation on your part. Send in the Coupon.

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MONTREAL TORONTO

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The Empire Cream Separator Co. of Can. Ltd., Montreal, Que.

Gentlemen:— Please send me, without cost or obligation on my part, booklets about the Empire Milking Machines. I have..... cows to milk.

Name.....  
Address.....

### PINE CREST FARM

Is offering for quick sale

#### 3 Holstein Bulls of High Merit:

No. 1 is the Senior Herd sire Sir Flossie Rag Apple, his sire the great Rag Apple Korndyke 8th; dam, Flossie Albrice Wayne; this bull is rising 5 years and weighs about a ton in ordinary farm fit. He is safe and sure; his calves come 75% heifers; his brother 6 months old sold for \$19,000. Here is a proven sire.

Nos. 2 and 3 are by our Junior sire, a son of Wood Crest Sir Clyde. His dam, Retta De Kol Maida, has 34.42 lbs. butter in 7 days, with 110 lbs. of milk a day. His sire's dam and his dam have an average of nearly 33 lbs. butter in 7 days, and over 100 lbs. milk in 1 day.

No. 2.—This young bull was calved April 1, 1917. His dam is a 25-lb. junior 3-year-old, giving 81 lbs. milk a day, has five 30-lb. sisters, and is a daughter of Pietertje Korndyke Lad.

Bull No. 3 was calved March 27, 1917. His dam is a daughter of Pontiac Artis Canada, and as a junior 2-year-old milked 57 lbs. a day on ordinary farm milking and feed.

These are all good, straight bulls. We are pricing them to go fast, as we must have the room.

LESLIE O. WARREN, Mallorytown, Ont.

### DON'T CUT OUT A Shoe Boil, Capped Hock or Bursitis

FOR ABSORBINE

will reduce them and leave no blemishes. Stops lameness promptly. Does not blister or remove the hair, and horse can be worked. \$2.50 a bottle delivered. Book 6 R free.

ABSORBINE, JR., for mankind, the antiseptic Uniment for Bolls, Bruises, Sores, Swellings, Varicose Veins. Always Pain and Inflammation. Price \$1.25 a bottle at druggists or delivered. Will tell you more if you write.

W. F. YOUNG, P. O. F., 258 Lyman's Bldg., Montreal.

PRIVET, BARBERRY, CEDARS, SPRUCE, Pines, Oaks, Chestnut, Walnut, Mulberry, for Hedges, Windbreaks, Timber. Mailing size, prepaid, dozen, same variety, one dollar; hundred, five dollars. List free.

JOHN DOWNHAM, STRATHROY, ONTARIO

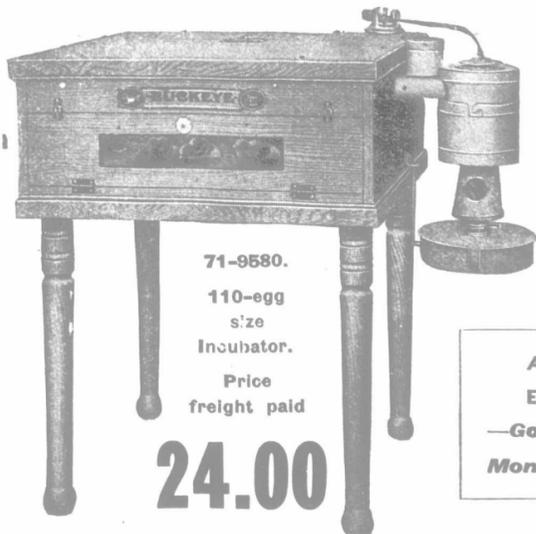
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Whether you intend to stay on the farm or not—and it's a mighty good place to stay—you'll want to be as well educated—as well trained—as the boys and girls anywhere. And you can be, for we bring the College TO YOU. We teach you in your spare time at home by mail: **Beginner's Course, Complete Commercial, Stenography, Special English, Story Writing, Matriculation, Teachers' Courses, Mind and Memory Training, Mechanical and Architectural Drawing, Electrical Course, Engineering (Stationary, Steam Traction, Gas or Gasoline Tractor, Automobile, Gasoline), Civil Service, Journalism, or almost any subject.** Ask about what interests you.

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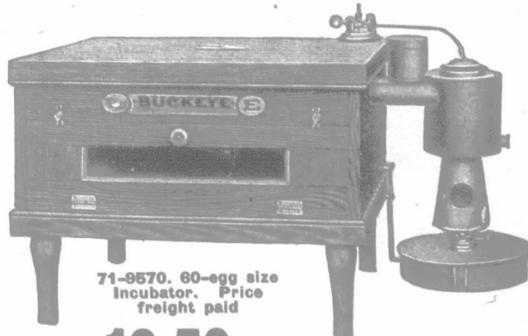
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# FOR BEST RESULTS USE A BUCKEYE



71-9580.  
110-egg  
size  
Incubator.  
Price  
freight paid  
**24.00**

EATON'S Pay the Freight  
Charges on Them to Your  
Nearest  
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71-9570. 60-egg size  
Incubator. Price  
freight paid  
**13.50**

All backed by the  
EATON Guarantee  
—Goods Satisfactory or  
Money Refunded in Full.

## CANADA'S NEED FOR POULTRY

becomes more and more apparent as the war goes on. A good pen of healthy chickens that produce lots of big, nourishing eggs is of no small value to the country during these days of increased production, and the steady demand for good eggs by far exceeds the supply, so the profits should particularly interest the poultry-keeper. There is, perhaps, no greater assistance to the accomplishment of successful poultry-raising than that offered by

### BUCKEYE INCUBATORS AND BROODERS

These are good reliable machines you can depend upon for lasting service and big results. They're excellent value at the prices—particularly so when you consider the fact that **WE PAY THE FREIGHT CHARGES.**

#### About the Hot-water Incubator

The three essential features of artificial incubators, viz., temperature, ventilation and moisture, have been given the closest attention, and the Buckeye system is so simple that almost any boy or girl who can read intelligently can operate these incubators. The Buckeye incubator has a hot-water tank suspended above the eggs. This tank is attached to the boiler on outside of case in which the water is heated by the lamp. Tubes connect tank and boiler. One carries the heated water to the tank, and the other carries the water back to boiler again to be heated.

Buckeye Brooders  
19, 22 and 30 ins. diam.

9.50 12.00  
16.00  
Freight Paid.



The tank is an improved design that absolutely insures a uniform temperature throughout the egg chamber, and is equipped with an extra large boiler of new design. Tank and boiler are both made of a heavy patented rust-resisting metal that should give good service.

The case is made of California redwood and beautifully finished like a piece of furniture. It has perfectly insulated double top, and the walls are so constructed that the necessary temperature can be maintained in practically any location. The thermostat regulates the temperature to a fraction of a degree.

The lamp consists of a seamless galvanized metal bowl, a wide-base Miller burner, and a one-piece galvanized metal chimney, making a lamp that should not easily get out of order.

The thermometer holder is sent with each thermometer, and the correct temperature can thus always be easily seen.

The improved egg tray is built to stay, and is guaranteed to give universal satisfaction.

71-9570. 60-egg size, short legs. Price, freight paid..... **13.50**

71-9580. 110-egg size, high legs. Price, freight paid..... **24.00**

71-9590. 200-egg size, high legs. Price, freight paid..... **32.00**

We can supply gas-burning attachment for Buckeye Incubators and Brooders at \$2.50 extra.

#### And Here's the Buckeye Brooder

The Buckeye is one of the finest oil-burning brooders, and has all the desirable features of the modern coal-burning brooder. With it you can raise big, healthy chicks, and more of them. It is free from all gases and odors whatsoever, and provides a circulation of pure fresh air all day long. The lamp is set in a convenient place, is well made, and is equipped with a heavy and satisfactory burner. The thermometer is mounted on a wood turning, and is dropped through the top of the brooder, bringing the bulb of the instrument right down to the level of the chicks. The brooder is made of galvanized metal, properly insulated, and is supported by three cast-iron legs. Made in three sizes, as follows:

71-9510. 19-inch diameter, capacity 60 chicks. Price, freight paid..... **9.50**

71-9520. 22-inch diameter, capacity 100 chicks. Price, freight paid..... **12.00**

71-9530. 30-inch diameter, capacity 150 chicks. Price, freight paid..... **16.00**

## The Well-known Buckeye Standard Colony Brooder \$20.00

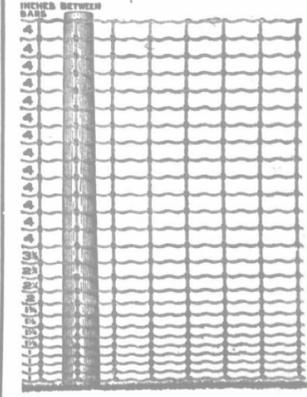
Broods from 100 to 500 chicks. It is self-feeding, self-regulating, simple and safe. No gases or fumes. Fresh and pure air is a special feature of this brooder. Operating cost is only a few cents a day. Saves labor, time and money. Very strongly built, and provides a constant, correct temperature, pure fresh air, and no chance for crowding. Every essential for the welfare of growing chicks. Burns hard or soft coal. Fill with coal once a day and shake down ashes twice a day—this is about all the attention it needs. Can be operated in any room or shed. The hover is heavy galvanized metal and 42 inches in diameter. It throws the radiated heat from the stove evenly over the chicks. The stove is of a design built especially for brooding purposes, and is strongly made of good quality iron, and simple in construction. The grate is a special feature and is of the rocker furnace type. Coal or ashes will not bridge or clog. Hard coal is most desirable, as it is cleaner, but other can be used. A very simple and powerful regulating device makes the brooder self-regulating. Once adjusted, it requires no further attention, keeps the heat just where you want it, regardless of change of weather.

71-3890. Price, freight paid..... **20.00**

71-0890. Larger size, capacity up to 1,000 chicks. Price, freight paid..... **25.00**

We Also Pay the Freight Charges on this Serviceable Poultry Fencing

Different heights priced at 59c, 73c, 85c and 95c.



A strong, tight and very closely-spaced Poultry Fence. It stops the smallest chicks, the wires being only one inch apart at the bottom. Note that the uprights are only 4 inches apart. It affords greater protection than poultry netting, as it is strong enough to prevent any animal getting in, top and bottom wires being No. 14, uprights and line wire No. 17, and all galvanized to prevent rust. This poultry fence is used in the Manitoba Agricultural College poultry-yards. Easy to erect and neat in appearance. **We pay the freight to your station, and sell this fence in 10-rod rolls. We do not cut rolls.**

71-3850. 17 bars, 36 ins. high. Per rod..... **59c**

71-3860. 20 bars, 48 ins. high. Per rod..... **73c**

71-3870. 23 bars, 60 ins. high. Per rod..... **85c**

71-3880. 26 bars, 72 ins. high. Per rod..... **95c**



71-3890.  
**20.00**

#### ROOT CUTTERS AND FEED CUTTERS AT LESS THAN HALF-PRICE, AND WE PAY THE FREIGHT CHARGES TO YOUR NEAREST STATION

A few still remain, so if you're in need of a good cutter or grinder here's a chance to save more than half usual price. The Root Cutter is shown in Fall and Winter Catalogue on page 521 (71-810). Regular \$13.25.

71-9430. Extra special **6.50**

The Feed Cutter is listed in the same Catalogue on page 521 (71-809). Reg. \$15.75.

71-9420. Extra special **7.75**

Freight Charges Paid by Us.

THE T. EATON CO LIMITED  
TORONTO - CANADA

**WISCONSIN INCUBATOR AND BROODER BOTH FOR \$15.75**

**130 Egg INCUBATOR**  
**130 Chick Brooder**  
BOTH FOR \$15.75 Freight and Duty PAID

If ordered together we send both machines for only \$31.50 and we pay all freight and duty charges to any R. R. station in Canada. We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. R. station. Hot water, double walls, dead air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Especially adapted to Canadian climate. Incubator and Brooder shipped complete with thermometers, lamps, egg testers—ready to use when you get them. Ten year guarantee—90 days trial. Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others, we feel sure of your order. Don't buy until you do this—you'll save money—it pays to investigate before you buy. Remember our price of \$15.75 is for both incubator and brooder and covers freight and duty charges. Send for FREE catalogue today, or send in your order and save time.

**WISCONSIN INCUBATOR CO. Box 236 RACINE, WISCONSIN, U. S. A.**

Write Us Today—Don't Delay

**POULTRY AND EGGS**

Condensed advertisements will be inserted under this heading at three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 50 cents.

**A GOOD TOULOUSE GANDER, PRICE \$7.00.**  
A. Stevens, Lambeth, Ont.

**BARRED ROCKS—GREAT LAYING STRAIN.**  
Cockrets, three dollars; pullets, two dollars.  
Central Poultry Yards, Colborne, Ontario.

**BLACK MINORCA COCKERELS, THREE**  
dollars, large birds and good laying strain.  
Fred Reekie, Camperdown, Grey, Ont.

**CLARK'S ORPINGTONS AND O.A.C. ROCKS;**  
50 Buff and White Orpington Cockerels, vigorous, good color and type, \$3 to \$5 each, 50 females, good laying strains; 15 O. A. C. Laying Strain Rock Cockerels, \$2.50 and \$3.00. Setting eggs in season. Order from an old and reliable breeder; satisfaction guaranteed. J. W. Clark, Cedar Row Farm, Cainsville, Ont.

**COCKERELS, BROTHERS TO SILVER CUP**  
winners, single comb white Leghorns, White Wyandottes; three and four dollars each for immediate sale. H. Berscht, Caledonia.

**FOR SALE, MAMMOTH BRONZE TURKEYS.**  
Angus Beattie, R. 1, Wilton Grove.

**FOR SALE—PURE-BRED WHITE HOLLAND**  
Turkeys—grand birds. Apply E. S. Baker, Springfield Farm, R. R. No. 6, Guelph.

**GRAND S.-C. RED COCKERELS \$4; PARK'S**  
famous Barred Rocks, \$3; pullets, \$2. Harry Backus, Chatham, Ont.

**INDIAN RUNNER DUCKS, PARTRIDGE**  
Wyandottes, Barred Rock, Rhode Island Red, Silver Campine, Black Spanish, cockerels. Bred right, priced right. John Annesser, Tilbury, Ont.

**PEERLESS WHITE WYANDOTTES, WIN-**  
ners at recent Waterdown Poultry Show; a few choice cockerels priced right. W. S. Bennett, R.R. No. 1, Freeman, Ont.

**RINGLET BARRED ROCKS; TRAPNESTED**  
heavy winter laying strain. Eggs, \$3.00 setting, guaranteed. F. Coldham, Box 12, Kingston, Ont.

**S.-C. WHITE LEGHORN COCKERELS—**  
two-hundred-sixty-egg strain—three dollars.  
C. Dickinson, Route 3, Fort Hope, Ontario.

**Rose Comb Rhode Island Reds**

Two cocks, and a number of cockerels, good laying strain, at \$3.00 each while they last.  
**ALEX. MCKINNEY, ERIN, ONTARIO.**

**POULTRY BARGAIN SALE**

Breeding pens or single birds, S.-C. Buff, Brown, and White Leghorns; Buff and White Orpingtons; S.-C. and R.-C. Rhode Island Reds; White, Silver, and Golden laced Wyandottes; Silver Crested Peasants; S.-C. Anconas; White and Barred P. Rocks. Hens two and three dollars each, Cocks and Cockerels three and five dollars each. Eggs from the above breeds, in season, two and three dollars per fifteen. The Idlewild Poultry Yards, Burlington, Ont. C. F. Coleman, Proprietor.

**SEED BEANS**

**MARROWFAT AND WHITE FIELD**  
First prize winners Richmond Hill Seed Competition—for sale, not less bushel lots, \$10 per bushel.

**SEED POTATOES**

**GREEN MOUNTAIN AND EARLY OHIO**  
First and second prize winners Richmond Hill Seed Competition—for sale, not less bag lots, \$3.25 per bag. Sacks free.  
**Summit Farm, Jefferson P.O., Ontario**

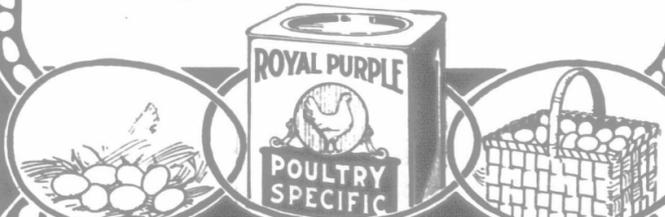
**Turnip Seed**

For Sale—Jumbo Swede and Greystone; Germination, 97 and 99 per cent. Grown 1917, by  
**Fred McGillis, R.R. East No. 2, Colborne, Ont.**

**FOR SALE**

**PAIR OF PURE-BRED PERCHERONS.**  
Mares, rising five years; weigh over 35-hundred lbs. Prize winners.  
**ROBERT RIDDELL, King P.O., York Co., Ont.**

**Royal Purple Poultry Specific**  
Is the big link between few eggs and a full basket.



**It Increases the Egg Yield**

Feed Royal Purple Poultry Specific to your fowls daily in a hot or cold mash. It will keep your hens active and healthy by assisting them digest and assimilate the food eaten.

If you feed our Poultry Specific according to directions to fowls which are properly housed you will get nearly as many eggs during the winter months as you ordinarily get in the summer. It will pay for itself many times over. Read the following letter from Robt. Cameron, Hensall, Ont.

"I have been using your Royal Purple Poultry Specific for the past year and it pays for itself many times over in the extra production of eggs, and it makes my hens lay in the winter when the price of eggs is high."

Sold in large and small packages.

**80 PAGE BOOK SENT FREE**

Send for this valuable book which describes the common diseases of poultry and stock. It tells how to build and remodel poultry houses and how to raise calves without milk. Write for a copy now.

**W. A. Jenkins Mfg. Co. Ltd., London, Canada**

**Hatch Chicks with a Cycle Hatcher \$7.50**

The Most Wonderful Incubator Yet Invented. Price.....

Free catalogue on request, illustrating Incubators, Brooders, Hoppers, Founts, etc. Make your hens keep you.

**C. W. COLLINS, of the Collins Manufacturing Co.**  
415 Symington Ave., TORONTO

**WALLER'S**  
Established over 30 Years. Spadina Ave., TORONTO

	Per lb. Alive cts.	Per lb. Dressed cts.
Crate fed Chickens, bled, picked clean to wing tips, 5 lbs. each or over.....	26	29 to 32
Chickens good farm stock, bled and picked clean to the wing tips.....	23	25 to 28
Old Hens, over 6 lbs. each.....	30	27
Old Hens, over 5 lbs. each.....	28	26
Old Hens, 3½ to 5 lbs. each.....	25	25
Old Roosters, over 5 lbs. each.....	18	21
Choice Young Hen Turkeys, bled and picked clean to wing tips.....	35	40
Choice Young Gobbler Turkeys bled and picked clean to wing tips.....	33	38
Choice Young Geese, heads off, picked clean to wing tips.....	25	25
Choice Ducks, heads off, over 5 lbs. each, picked clean.....	30	30
New Laid Eggs—best price.....		
Butter, Good Dairy—40c. per pound		

We return the money the day the goods are received up to bank hours. Extra demand for Large Fowl alive.—Notice Price.

**Steel Wheels Made to Fit Your Old or New Wagon**



Now is the time to place your order for a set of "COOKE" Steel Wheels! They are giving universal satisfaction in every province in the Dominion. The cost is small, and as a labor saver they are unexcelled. A set of our wheels will make a new wagon out of your old one. Write to-day for illustrated circular and price list, together with free chart showing how to take measurements correctly, and testimonials from satisfied customers in all parts of Canada. Remember we quote price delivered to your nearest station, no matter where you live. The Cooke Metal Wheel Company, 19 West St., Griffla, Ontario

**Advocate Ads. Pay**

**Gossip.**  
**The Rife Holstein Sale Postponed.**  
Owing to floods on the C. P. R. and the inability of purchasers to reach the Holstein sale to be held by Wm. A. Rife, Hespeler, Ont., on February 21, the event is postponed until March 8. The advertisement appeared in "The Farmer's Advocate" both on February 7 and February 14. Those who failed to procure a catalogue should write at once to Mr. Rife requesting same and full particulars. Remember the date, March 8.

**Big Shorthorn Sale at Guelph.**  
At the annual sale of Shorthorns, to be held in the Winter Fair Buildings at Guelph on Wednesday, March 6th, under the management of the Guelph Fat Stock Club, there will be a splendid collection of about sixty-five head. In the offering are some extra good young bulls of splendid type, in fine condition and of excellent breeding. Some very promising entries are listed by W. C. Edwards & Company, of Rockland, of the Clipper, Missie, Goldie and Bellona families. In the sale are also members of such noted Scotch families as Roan Lady, Claret, Avere, Village, Kiblean Beauty, Nonpareil, Mayflower, Jealousy, Mildred, Rosebud, Cecelia and others. A few very nice young females of fashionable breeding are included. For catalogues or any information, address the Secretary, J. M. Duff, Guelph.

- Sale Dates.**
- March 5, 1918.—W. W. George, R. 2, Mossley, Ont.—Holsteins.
  - March 5, 1918.—E. C. Chambers & Sons, Harley, G. T. R. or Scotland, Ont., T. H. & B.—Holsteins.
  - March 5, 1918.—Montgomery Bros., Lanark, Scotland.—Clydesdales.
  - March 6, 1918.—Guelph Fat Stock Club.—Pure-breds; J. M. Duff, Secretary.
  - March 6, 1918.—G. F. Mahon, Woodstock, Ont.—Holsteins.
  - March 7, 1918.—L. K. Weber, Hawkesville, Ont.—Shorthorns.
  - March 7, 1918.—Bruce County Stock Breeders' Club, Walkerton, Ont.—Shorthorns.
  - March 7, 1918.—Sherrick Bros.—Bethesda.—Holsteins.
  - March 7, 1918.—W. J. Cowan, Cannington, Ont.—Clydesdales, Aberdeen-Angus and grade cattle.
  - March 8, 1918.—W. J. Wray and W. O. Coon, Tottenham, Ont.—Scotch Shorthorns.
  - March 8, 1918.—Wm. A. Rife, Hespeler, Ont.—Holsteins.
  - March 11, 1918.—D. A. Boyle, Woodstock, Ont.—Jerseys.
  - March 12, 1918.—J. M. Van Patter & Sons, R. 1, Aylmer, Ont.—Holsteins.
  - March 13, 1918.—Perth District Breeders' Club, Stratford, Ont.
  - March 13, 1918.—Laidlaw Bros., Aylmer, Ont.—Holsteins.
  - March 14, 1918.—London District Holstein Breeders' Club, London, Ont.—Holsteins.
  - March 15, 1918.—Weil & Lyfield, Jarvis, Ont.—Shorthorns.
  - March 15, 1918.—H. Clark Hanmer, Norwich, Ont.—Holsteins.
  - March 19, 1918.—Noah S. Bender, Tavistock.—Holsteins.
  - March 20, 1918.—Thos. McNea, R. 16, Owen Sound, Ont.—Holsteins.
  - March 20, 1918.—Oxford District Holstein Breeders' Club Consignment Sale, Woodstock, Ont.—Holsteins.
  - March 21, 1918.—Henry Arkell & Son, R. 2, Guelph, Ont.—Oxford Ewes and Ewe Lambs, Horses, Implements, etc.
  - March 26, 1918.—Stoneycroft Stock Farm, Ste. Anne de Bellevue, Que.—Ayrshires, Holsteins, Clydesdales.
  - March 27, 1918.—Southern Counties Ayrshire Breeders—Ayrshires.
  - March 27, 1918.—Ira B. Vannatter, R. 1, Georgetown, Ont.—Shorthorns, implements, etc.
  - March 28, 1918.—G. A. Brethen, Norwood, Ont.—Holsteins.
  - April 2, 1918.—Brant District Holstein Breeders' Club Consignment Sale, Brantford, Ont.—Holsteins.
  - April 2 and 3, 1918.—Ontario Consignment Sale Company, London.—Shorthorns.
  - April 3, 1918.—Belleville District Holstein Breeders' Club Consignment Sale, Belleville, Ont.—Holsteins.
  - April 10, 1918.—T. G. Gregg, R. 5, Ingersoll, Ont.—Holsteins.

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A few dollars each year invested in an Imperial Income Policy will secure the payment of a regular, monthly income to a man's family after he's gone. We have an interesting booklet which tells all about it, and will send a free copy to any man or woman who asks for it.

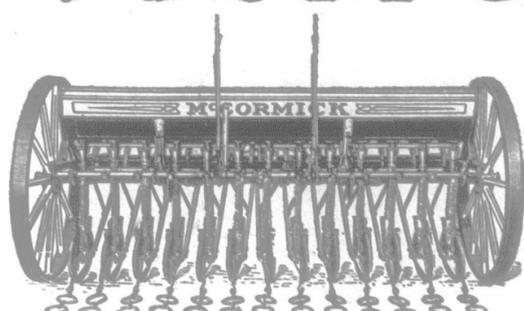
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**BECAUSE** drill-planted seed gets an earlier, more even start — because drill planting saves seed and produces a better grade of grain — because drill planting saves time and work — and because the **McCormick** drill is one from which you get all these advantages, buy a **McCormick** drill.

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See the **McCormick** local dealer when you are ready to buy. He will show you all the details of construction that put the **McCormick** drill at the head of its class. Or, if you write the nearest branch house below, we will send you full information.

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EAST—Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N. B.

## The Easy Way on Wash Day

Why My "1900" is the Easiest, Quickest and Best Washer for You



**N**EITHER you nor any other woman needs to be reminded that washing is a mighty disagreeable household task by the "wash-tub and wash-board" method. I have discovered that most women are keenly interested in finding some mechanical aid that will remove this most objectionable of drudgeries. That is why so many Canadian housewives have come to me as the result of my claim that I have the machine that answers the "wash" problem completely. My "1900" Gravity Washer will save you all the work of washing. It does away with all the drudgery of the back-breaking rubbing. It washes clean, because the hot soap-suds are driven right through the clothes until they are thoroughly clean. And it does not wear or tear the clothes; they are firmly held while the tub and water are in motion. The finest linens and laces or blankets, come out of the "1900" Gravity Washer without having been strained or stretched—without frayed edges or broken buttons.

The "1900" Gravity is operated with an ease you will marvel at. Gravity is the basic reason for its ease of operation. A child can run it.

"Does it wash with speed?" you will ask. The "1900" Gravity Washer takes just six minutes to wash a tub full of very dirty clothes. Of great importance, too, is the lasting quality of this "1900" Gravity. The tub (detachable, by the way) is made of Virginia White Cedar, bound together with heavy galvanized steel hoops that will not rust, break or fall off. The "1900" Gravity is built for use; it will last a lifetime.

If you are interested, let me tell you more about it. Thousands of Canadian women have written to let me know what a genuine help the "1900" Gravity is to them. A New Brunswick woman says about hers:

"I enclose payment in full for washing machine and wringer. I am very much pleased with the washer. It is the best I have seen. It makes wash-day a pleasure."

Try the "1900" at my expense. I will send it to you for a free trial, without a cent deposit. Do as many washings with it as you like within the trial period of four weeks, and if you then find that you can afford to do without it, send it back at my expense. If you want to keep it, as I know you will, pay for it out of what it saves you, week by week, 50c. a week if you like, until it is paid for. If you want to know specially about this trial offer, better address me personally.

**K. G. MORRIS, Manager "1900" Washer Company**  
357 Yonge Street TORONTO

## CASH PRIZE Competition

### Bulletin No. 1

One list of nine new subscribers has just been sent in, several lists of six names each, and a lot of lists containing two and three names, are coming in every day. The contest to get new subscribers to the Farmer's Advocate gets more exciting every day since the weather has improved. The ages of the Contestants run from nine to eighty-seven. The more the merrier, and at the present stage of the contest it is impossible to even guess at the winner.

The three leaders at the present are:

- (1) W. J. Trebelco
- (2) Michael Unverzagt
- (3) F. A. Weylie

NEXT WEEK, there may be three new leaders, as those whose names you see to-day have only a small lead over several other competitors. Michael Unverzagt is only three names behind the leader, and F. A. Weylie is just one name behind Michael Unverzagt.

### RULES OF THE COMPETITION

- (1) Only names of new subscribers to count.
- (2) All lists of names must be at this office before the end of March.
- (3) The contest is open to all subscribers and members of their families.
- (4) Names sent in from Jan. 1st. to March 31st., will count in the Competition.
- (5) The Contestant sending in the largest number of names of new subscribers between the dates specified, in addition to a liberal commission on each name and a special bonus of \$2.50, for each completed list of ten names, will receive:

**A Cash Prize of Five Dollars**

The sender of the second best list, in addition to the commission and bonus, will receive:

**A Cash Prize of Three Dollars**

For the third best list, in addition to the commission and bonus, the sender will receive:

**A Cash Prize of Two Dollars**

**Do You Want to Win a Prize? In Any Event, You Will Make Money on Each Name You Send in.**

There is plenty of time to finish up among the three leaders. If you want to make some money in an easy and pleasant manner, simply cut out the coupon at the bottom of this advertisement and send it to us, and we will send you the necessary supplies at once.

### COUPON

The Farmer's Advocate and Home Magazine, London, Ont.

I want to join your Cash Prize Competition, and will try to send you in the names of some new subscribers at once.

Name.....Age.....

Address.....

Do you or your people subscribe?.....

The price of bricks has gone up very little in three years. You can build an average-size, warm house on your farm of

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for the proceeds of half as many hogs as in 1914.

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 Now is the time to plan for profit.  
**Pratt's POULTRY REGULATOR**  
 Builds up healthy, happy layers with big egg-producing records. Increases fertility and insures perfect chicks. A very few of the extra eggs you get will quickly pay for Pratt's.  
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**High Grade Seed**  
 Registered 1st Generation, O.A.C. No. 72 Oats, \$2.00 per bus., Government germination test 97%. Improved O.A.C. No. 72 Oats, grown from strains of registered seed, \$1.60 per bus., Government germination test 98%. Registered O.A.C. No. 21 Barley, \$2.50 per bus., Government germination test, 97%. Improved O.A.C. No. 21 Barley, grown from strains of registered seed, \$2.00 per bus. The above grains have been produced from carefully graded, selected seed; guaranteed true to variety. Free from smut and noxious weed seeds. Small, white field beans, extra good quality, \$10.00 per bus. All grains offered produced on our own seed farms. Samples sent on request. Sacks free. Prices, F.O.B. Alliston, C.P.R. or G.T.R.  
 Ruthven Bros., R.R. No. 2, Alliston, Ont.

**UNITED FARMERS' CO-OPERATIVE CO. LIMITED**  
 No. 2 Francis Street : TORONTO  
**HARNESS:**  
 We have a line of light and heavy harness. Best quality. It will PAY you to get our prices.  
**OIL CAKE:**  
 We still have a few cars but it is going fast. Land Plaster and Agricultural Lime. WRITE TO US FOR PRICES.

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 WE ARE THE LARGEST DISTRIBUTORS OF READY ROOFING IN CANADA. WE SELL DIRECT TO USERS. WE CAN SAVE YOU MONEY. WRITE FOR FREE SAMPLES.  
 HALLIDAY COMPANY, HAMILTON FACTORY DISTRIBUTORS CANADA

**O. A. C. 21 BARLEY**  
**O. A. C. 72 OATS**  
 which are the best yielders and most improved varieties now grown in Ontario. Our supply was grown on choice land and from selected seed, so is clean and true to name. Barley, \$1.75, Oats, \$1.30 per bushel. Bags free.  
 JOHN ELDER & SONS - Seed Growers Hensall, Ont.

**METALLIC ROOFING CO. LIMITED**  
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**CEILING**  
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**O.A.C. No. 72 Seed Oats**  
 Clean and of excellent quality. Sample and prices on request.  
 R. F. Klinck, R.R. No. 2, Gormley, Ont. YORK COUNTY

**O. A. C. No. 72 OATS**  
 for sale. Choice seed oats, pure and clean, prize winners in standing grain competition. Price \$1.25 per bushel. Sacks free.  
 E. BRODERICK, R. R. 1, EXETER, ONT.  
**White Blossom** Sweet Clover—Have a limited amount for sale—\$16.00 per bus. f.o.b., our station. Bags 45c. extra.  
 GEO. McNERNEY, Ennismore, Ont.

**Questions and Answers.**

**Miscellaneous.**

**Lightening Rods.**

When putting lightening rods on a building, is it necessary to ground the wires at both ends?  
 2. How deep in the ground should the wires be placed?  
 3. Is there any danger from the wires touching the shingles or any part of the building?  
 4. Do the points have to reach above the highest part of the building? Do they have to be sharp?  
 5. What distance should the points be apart?  
 6. Where can I get a book on the subject?

C. D.

Ans.—1. We have noticed barns where the wire was only grounded at one end, but we believe it necessary to ground at both ends. Bulletin No. 220 on "Lightning Rods," by Prof. W. H. Day, states that the number of ground connections for an oblong building should be at least two; on an L or T-shaped building, at least three; on a U-shaped building at least four. The location is preferably at opposite corners, though this may be modified to avoid manure, or to go down near conductor pipe or other metallic portion of the structure. Ground rods should not be bunched, but should be distributed as well as possible.  
 2. The ends of the wires should be down to perpetual moisture, which would be six or eight feet, depending on the soil.  
 3. The wires should be supported so that they will not touch the shingles or building.  
 4. The points should be four or five feet high and must extend at least eighteen inches above the highest part. They should be sharp.  
 5. Twenty to thirty feet apart; the first one on the ridge not more than five feet from the end. They should also be placed on or beside chimneys or cupolas.  
 6. The Bulletin previously mentioned gives concrete information on the subject and may be secured by writing the Agricultural College, Guelph, or the Department of Agriculture, Toronto.

**Gossip.**

**Two New British Breed Societies.**

In the week ending January 26th, two new British breed societies were established on firm lines—one for White Park cattle (formerly wild herds, now domesticated), and the other for Percheron Horses, which are growing distinctly in favor. The Duke of Bedford, who has a herd of horned wild cattle at Woburn, Beds, is the President of the Park Cattle Society. The cattle are white with black noses and feet and dark rings round their eyes. There are about 12 horned herds and the same number of polled herds. These cattle were the aboriginal cattle of Britain. They were here when the Romans came. On the council of the new body are Lord Dynevor, a Welsh landlord with a very old herd; Sir Claud Alexander, who has a horned herd which gives lots of milk; Sir William Shakerley, who has a big herd in Cheshire; T. P. Case, who has some milkers doing 1,000 gallons a lactation; John Cator, M.P.; Major Gurney and C. Ronald Mathias, who has a herd over 150 head strong in mid Wales.  
 The idea is to form a herd book and register the stock in it, and to show at the Royal and other exhibitions when peace is declared.  
 The objects of the Percheron Society are to establish the breed firmly and to start a stud book and to stimulate the breeding of heavy and light draft horses suitable for national (war) purposes. The Earl of Lonsdale is the first president and the signatories to the articles of Association include the Earls of Kimberley and Mexborough, Sirs W. H. Birkbeck, H. Hoare and M. Burrell, and a lot of other military gentlemen. The Percheron has a rare chance to make good in England.

**How I Make Big Money Out of "Ornery" Horses**

By J. A. BUTLER

ABOUT two years ago I witnessed up in New York State an exhibition of horse-training that opened my eyes. A man by the name of Mackley took a devil of a mean, vicious mare that hadn't been harnessed for seven months and in a few days had her gentle enough for a school girl to drive. Mackley had taken the mare off the owner's hands for \$50 and just ten days after sold her for \$175.00. A clear profit of \$125.00 in ten days!



"ornery" colts and horses at bargain prices, and after training the animals, selling them at a good profit. However, I also pick up good money handling colts and training horses for others on a fee basis. For instance, a farmer had a beautiful driving bay that had the bad habit of shying. A piece of paper blowing across the road would set the horse crazy. The owner thought a great deal of the animal, but couldn't take chances on the shying habit. A friend of his for whom I had done some work put this man in touch with me and in a few hours I had the horse completely cured of the habit—for which job I received \$50.

**Curing Bad Habits**

You can see from this that my work consists not only in breaking colts and "gentling" vicious horses, but in curing the various bad habits a horse can have—such as shying, balking, fear of automobiles, etc., pulling at hitching strap, pawing in the stall, etc. Beery's methods of colt breaking are particularly amazing. Under the old way of handling green colts one usually had to half hit the horse as well as himself to accomplish anything—and then the colt was usually spoiled or hurt in some way or other. But, when you apply Beery's principles, there is no hard, long work or injury to the colt.

That started me investigating. I learned that Mackley had simply used the methods introduced by the famous horse trainer, Jesse Beery. Beery, I learned, used to go about the country giving wonderful exhibitions in colt-breaking and horse-training; but realizing that he could accomplish more by teaching his methods by mail, had given up his exhibition-work to spread his horse-training secrets by mail-instruction. Mackley had studied Beery's Course in his spare time and in a few months was able to accomplish magical results with green colts and horses with bad habits.

**Other Successes**

Mackley's work showed me a way to make some nice money and I determined to take Prof. Beery's Course in horse-training—but before doing so I made further inquiries. Here are what a few of Beery's students said. I'll let them tell of their success in their own words.  
 Mr. S. L. Arrant writes: "Just to test Beery's methods, I bought the worst balky, kicking, fighting horse I could find. Paid \$65.00 for him. After handling him only a few hours according to Beery's system I sold him for \$135.00.  
 Mr. Dell Nicholson, Portland, Mich., writes: I have trained a four year old mare that was given up by everybody. Bought her for \$35.00, and now have her so gentle, my little boy handles her. Wouldn't take \$200.00 for her.  
 Dean L. Smith, Findley, Ohio, writes: By following Beery's instructions have changed a worthless, dangerous balker into a horse worth \$225.00.  
 Everett McBlock, Elkhart, Ill., writes: Have just broken a pony to drive and taught it some tricks. Owner bought it for \$17.50. Paid me \$40 to train it. He just sold it to a show company for \$150.00.

**How I Work**

The big source of my income is in buying up

No one should have a biting, kicking or balky horse when it is so easy to cure these vicious habits. No one should attempt to break in a colt the old fashioned way when Beery's methods make the task so easy. To every horse owner, to every lover of horseflesh, my advice is to get acquainted with the Beery principles. You can not only make money for yourself, but you can do a world of good, particularly at this day when war-demands have placed a premium on horses.

**Wonderful Book Free**

I have been requested to state that Prof. Jesse Beery will send his remarkable booklet, "How to Break and Train Horses" free to those interested. It is a booklet well worth having as it reveals some startling information on horse-training. I have heard men who considered themselves expert horsemen say that the booklet was a revelation to them. There is no use in my going into details on the booklet when you can get it free for the asking.  
 Just drop a line to Prof. Jesse Beery, Dept. 622A, Pleasant Hill, Ohio, and the booklet will be sent free by return mail. A postcard will do as well as a letter.

**Be a "High-Power" Farmer**

Knowledge of nitrogen makes both the high-power fighter and the high-powered farmer. Both know and appreciate the tremendous energy there is in it. Nitrogenous foods in the stable—nitrogen in the plant foods of the soil are the aims of the up-to-date agriculturist.  
 That is why we are in the business of growing and selling the seed of the Sweet Clover—the heavy artillery of the nitrogenous and nitrogen gathering legumes. Just now we want the farmers of Canada to become high-power farmers. What you have done in the past you can surpass in the future, by growing a plant so prolific in food, so potent in its soil re-building power. Grow big crops of it. They will be rich in protein, in crude fats, tonic and digestible in character. They will leave the soil full of decayed root stems, depositing enormous quantities of nitrogen and of decayed vegetable matter, open and friable and fertile. As a BETTER variety, giving better forage, more easily handled and of better quality we recommend our own selected strain, known as CANADIAN ALBOTREA. Write us about it. It actually costs you less per acre to seed with it than with the common variety. Ask for our pamphlet, "The Hollow Stem," that will tell you about it.

**The Canadian Albotrea Clover Co., Limited**  
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 Write for our large photo-illustrated Catalogue No. 7—It's free to you.  
 THE ADAMS FURNITURE CO., Limited  
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Use proper precaution. Make your own will on a Bax Legal Will Form. Don't take any substitute. You must be sure. If your stationer has not Bax, send 35c. to Bax Co., 163 College St., Toronto.

When writing please mention Farmer's Advocate

Gossip.

Laidlaw Bros.' Holstein Sale.

The thirty-four high-class Holsteins now advertised to be sold by public auction by Laidlaw Bros. at "Ourvilla Farm," Aylmer, Ont., for Wednesday, March 13, are in more ways than one an exceptional offering. The breeding and individuality are both of the highest merit and, to make them all the more attractive, every animal was bred on the farm. The feature of this, of course, lies in the fact that this sale may be termed purely a "breeder's sale," and naturally a safe place to buy. It is also worthy of note that thirty of the offering are females, all of which are of milking age. The majority of these will be milking well; quite a number, in fact, being either fresh or near freshening. Seven of these are daughters of the well-known R. O. M. sire Dutchland Colantha Sir Abbekerk, and twelve are granddaughters of the same sire. The oldest of these are four-year-olds, and while all are from tested dams, very few of these have as yet been tested, as Messrs. Laidlaws, owing to scarcity of labor, have done no testing whatever for the past three seasons. These heifers, however, will speak for themselves on sale day. They are of the type throughout that spells production, no three teasers. Dutchland Colantha Sir Abbekerk, besides having 31 officially tested daughters, stands first in Canada as the sire of 16 producing sons. In breeding he is also up with the best, as he is a grandson of Colantha Johanna Lad that has 11 daughters above 30 lbs. of butter in 7 days, and 18 above 600 lbs. of milk in 7 days, which is about double the number of any other sire. The young bulls offered are only four in number, and three are by Maplecrest De Kol Champion, and one by Finderne King May Fayne. These are the two herd sires, to which the females have all been bred, and the former is a full brother to the one-time world's yearly record cow Banostine Bell De Kol, and is still the only cow in the world that has two daughters above 1,300 lbs. of butter in one year. The latter bull, Finderne May Fayne, has been a prominent winner throughout the Eastern and Western Canada Fair Circuits, and is by the same sire as the former world's record three-year-old, Finderne Holigen Fayne and the former two-year-old world's champion, Finderne Mutual Fayne, while his full sister, Waschutte Fayne's three-year-old record of 35.60 lbs. of butter in 7 days was the second highest record of the breed when made. The offering is strong throughout, and following the day after the Van Patter sale, the attendance should be large. The terms of sale will be cash with credit up to six months on bankable paper bearing seven per cent. per annum. See advertisement and write for catalogue.

Questions and Answers. Miscellaneous.

Pasture for Calves.

Will frosted beans make suitable feed for pigs if ground and mixed with oat chop?

2. Will rape make good pasture for young calves? A. M.

Ans.—1. If the beans are not musty or mouldy we see no reason why they should not be used for feed.

2. We prefer the clover pastures for young calves, as they are liable to scour on rape. Rape is a good pasture for pigs and makes excellent fall feed for sheep and stockers.

Gravel and Cement for Wall.

How much material will be required for a cement wall 185 feet long, 9 feet high, with 130 cubic feet deducted for windows? How much material will it require to put a floor under the barn 36 by 80 feet? F. S.

Ans.—The wall proper if built one foot thick, would require about 57 cubic yards of gravel and 48 barrels of cement. The amount of material might be reduced a little by using a few small stones in the centre of the wall. However, care would have to be exercised in putting them in. A footing for the wall would also be necessary and if built 2 feet wide and one foot deep would require 14 yards of gravel and 11½ barrels of cement. A considerable quantity of field stone could be used in the footing. A 4-inch floor of the dimensions given would require in the neighborhood of 35 cubic yards of gravel and 30 barrels of cement.

**Dreadnaught**  
**TIRE CHAINS**

Blinding storms, rain, snow, icy roads, sharp curves and—then come skidding accidents galore.

One such accident may cause loss of life or, at any rate, car damage that will cost considerably more than the price of tire chains.

Dreadnaught Tire Chains not only prevent all skidding accidents, but furnish the increased pull and grip necessary to ram through mud, snow, and slush.

They are well made, strong, durable and rust proof. Guaranteed to give more service at less cost than any other chain on the market. Get a set from your supplyman, and remember, "Dreadnaught" will make good—or we will. Write for price list and descriptive circular.

**McKinnon Columbus Chain Limited**  
Manufacturers of Electric and Fire Welded Chains  
ST. CATHARINES, - ONTARIO 3

**Interprovincial Pressed Brick**  
Red Buff and Fire-flashed Colors

WRITE FOR FREE SAMPLES TO-DAY  
**INTERPROVINCIAL BRICK CO. OF CANADA, Limited**  
Office: 154 SIMCOE ST., TORONTO Plant: CHELTENHAM, ONT.

**FIRST PRIZE**  
**O. A. C. No. 72 OATS**  
In Field Crop Competition

The kind you need if wishing to enter in same. Also some O. A. C. No. 21 Barley; both grown from registered seeds, and are true to name. A few bushels of Pearce's Imp. Tree Bean, Small Field Beans, Alsike and Sweet Clover. Samples and prices on request.

**OSCAR KLOPP, SEED GROWER**  
Zurich, Huron County, Ontario

**10-15-20**

Years from now the Bissell Silo will be giving good service. It is built of selected timber, treated with wood preservatives that prevent decay. It has strong, rigid walls, air-tight doors, and hoops of heavy steel. Therefore it lasts, simply because it can't very well do anything else. Our folder explains more fully—write Dept. W.

**T. E. Bissell Co., Ltd., Elora, Ont.**

**CLYDESDALES AND SHORTHORNS**

I have on hand a number of real choice young mares and fillies. Eight excellent young bulls, from 9 to 12 months, of Right Sort and Royal Blood breeding; also a number of females. Inspection invited.

**J. B. CALDER, R. R. 3, GLANFORD STATION, ONTARIO**

**Canadian-bred Clydesdale Stallion.**

5 years old, sure and broken to double and single harness; weight 1600 lbs. For price of a gelding. Write at once. Holstein bulls for sale. **R. M. Holtby, R. R. 4, Port Perry, Ontario**





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Griffith's Giant Rope Traces are sold separately if desired. All the strength of leather at a fraction of the cost. Price, per set of four, with heel chains, \$6 (or \$6.50 west of Fort William).

Griffith's Giant Yoke Ropes take the place of leather pole straps. Price complete with snaps and slides, only \$1.50 per pair (or \$1.75 west of Fort William).

If your dealer can't supply you, order direct. Write for booklet.

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68 Waterloo St.,  
STRATFORD, ONT.

**DR. PAGE'S ENGLISH SPAVIN CURE**

Cures the lameness from Bone-Spavins, Side-Bones, Ringbones, Curbs, Splints, etc., and absorbs the bunched, does not kill the hair, absorbs Capped Hocks, Bog-spavins, thick pastern joints; cures lameness in tendons, most powerful absorbent known; guaranteed or money refunded. Mailed to any address. Price \$1.00.

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Our bulls have won at large fairs in Eastern and Western Canada from London to Edmonton, in 1917, thirty-two first prizes and championships. Parties wanting a first-class herd header, should look them over. Address:

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**MESSRS. A. J. HICKMAN & CO., (Late Hickman & Scruby, Court Lodge, Egerton, Kent, England. Exporters of PEDIGREED LIVE STOCK**

of all descriptions. Specialty made of draft horses, beef and dairy breeds of cattle, show and field sheep. Illustrated catalogues and testimonials on application. All enquiries answered with pleasure. Now is the time to import. Prospects were never better, and insurance against all war risks can be covered by payment of an extra 1% only.

**SUNNY ACRES ABERDEEN-ANGUS**

Bulls of serviceable age and females not akin.

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**Alloway Lodge Stock Farm**

Angus - Southdowns - Collies

SHOW FLOCKS

Rams and ewes. Heifers in calf to Queen's Edward, 1st prize, Indiana State Fair.

**Robt. McEwen, R. R. 4, London, Ont.**

**Kennelworth Farm Aberdeen-Angus**

A grand lot of calves for sale; ages in the neighborhood of 7 months. Victor of Glencairn at head of herd.

**PETER A. THOMPSON HILLSBURG, ONT.**

**ABERDEEN-ANGUS**

Alonzo Matthews, Manager, Forest, Ontario.  
H. Fraleigh, Proprietor, Forest, Ontario.

**Balmedie Aberdeen-Angus**

Get high-class Angus bull and breed the champion steers. I have show-ring quality bulls from 10 to 24 months of age; also choice 1 and 2-year-old heifers.

**T. B. BROADFOOT, FERGUS, ONT.**

**Brownlee Shorthorns.** Offers a choice lot of young bulls, ranging in ages up to nine months and sired by the Nonpareil bull, Royal Saxon. See these before buying elsewhere. Could also spare a few females. **Douglas Brown, Right, Ont., R. R. 3. Ayr Station, C. P. R.**

**Gossip.**

**The Glenboyle Sale of Jerseys.**

The coming dispersion of the famous Glenboyle herd of pure-bred Jerseys scheduled to sell at Woodstock, on Monday, March 11, is we feel sure, being awaited with interest by every Jersey breeder in Ontario as well as many others in the adjoining States and Provinces. It is not often that champions of any breed come into an unreserved public sale-ring and in this particular case when there are several, Jersey breeders everywhere, should appreciate Mr. Boyle's faith in them, in that he is offering his entire herd at prices that they themselves will choose to name. The herd in general, as seen by our representative recently, is far above the average; good individuals, strong in type, heavy in production and clean throughout. "Beauty Maid", the Canadian R. O. P. champion four-year-old and the second highest yearly butter cow for all breeds in Canada is perhaps deserving of first place, in mentioning the females. Her record for the 365 days in her four-year-old form was 14,852 lbs. of milk and 872 lbs. of fat, which places her first for both milk and butter in her own division and breed and second for butter in Canada for all breeds in the four-year-old form. Aside from her great producing ability she is also an excellent type of Jersey, and with her on the sale will be her dam, Bell of Roslin Park, that is only two years older than her daughter, and her two sons Imperial Beau and Imperialist. The former is a 25-months bull and the latter an 11-months calf, and both are got by the senior sire at "Glenboyle". Imperial Majesty the herd sire is one of Canada's greatest sires of to-day and his sire, Royal Majesty, now has more R. O. M. daughters with over 500 lbs. of fat than any other imported sire. On the dam's side he also has merit; his dam being Rosy Morn, a granddaughter of the great Flying Fox and his second dam, a highly commended daughter of Defender that was one of the best breeding sons of that great breeding bull, "The Owl". Canadian breeders who are in need of a new herd sire should plan without fail to be in the sale-ring on March 11. Beauty Maid is bred again to this great bull. There will also be nine daughters of the herd sire in the sale and several of these that were milking last year as two-year-olds went as high as 29 lbs., on twice a day milkings. All of these that are of breeding age will be bred to the two-year-old bull, Imperial Beau. The older breeding females will, of course, be in calf to the senior sire and among these are such cows as Flora of Glenboyle, the champion R. O. P. three-year-old of the breed; her record for the year being 11,954 lbs. of milk and 634 lbs. of fat. That she has also been a profitable breeder will be seen when reviewing the catalogue in which will be three of her daughters as well as one granddaughter all got by Imperial Majesty. Springbank Butter Girl holds the third Canadian record among the females for milk in the 3-year form, making 12,544 lbs. of milk and 608 lbs. of fat for the year. She has a sweet heifer calf at foot which is the first calf on the farm by Imperial Beau. Sadie Miss Polo is the highest record two-year-old in the herd with 9,874 lbs. of milk and 544 lbs. of fat and stands second in Canada for the age. She was due, shortly after our visit to the farm, to the service of Imperial Beau.

We also wish to call attention to the ten-year-old cow, the oldest cow selling, Maid of Dentonia. She is one of the perfect types of the breed. She has just finished her yearly record with over 476 lbs. of fat and 10,000 lbs. of milk, and is due again soon to the senior sire. Regarding the balance of the offering and further particulars on these, write now for catalogue of sale, and mention this paper. Address, D. A. Boyle, Woodstock, Ont.

Two men were hotly discussing the merits of a book. Finally, one of them, himself an author, said to the other: "No, John, you can't appreciate it. You never wrote a book yourself."

"No," retorted John, "and I never laid an egg, but I'm a better judge of an omelet than any hen."—Philadelphia "Star."

**UNRESERVED AUCTION SALE OF**

**32 Pure-Bred Scotch Shorthorns**

**18 Shorthorn Grades**

The Property of L. K. Weber, Hawkesville, Ontario

**Thursday, March 7, 1918**

at one o'clock sharp.

Bull Rush (Imp.) the present herd sire, succeeded Highland Chief, a bull out of Nonpareil. Dalmeny, Lord Lieutenant (Imp.) and Good Morning (Imp.) were former sires used on the herd. Females are regular breeders and trace to Sultana (Imp.) 31160. Many will freshen in April or early May. The young stock bulls and heifers are growthy and of good conformation. The continued use of imported blood indicates the quality of stock in the sale.

**No Reserve as the Farm is Sold**

Farm is three miles south of Wallenstein, C.P.R., Guelph and Goderich line; six miles north-west of St. Jacobs, G.T.R., Kitchener and Elmira Branch.

CATALOGUES ON APPLICATION TO

**L. K. WEBER, HAWKESVILLE, ONTARIO**

**Pinehurst R. O. P. Dual-Purpose Shorthorns**

Am offering 2 choice young bulls ready for service; ages 11 months and 18 months, of the same family as Buttercup =111906=, the champion 3-year-old Shorthorn cow of Canada in R. O. P. See photo of this cow on page of this issue. Write for prices, etc. or better still, come and see my stock.

**G. W. CARTER PINEHURST FARM, ILBERTON, ONT.**

**BROOKDALE FARM HEREFORDS**

Herd headed by Bonnie Ingleside 7th, the Canadian-bred champion bull at Toronto, 1914-1915. We are offering several young bulls that were Toronto and Ottawa winners this year, all sired by the herd bull, as well as a few females in calf to him. Come and see our herd or write us for anything in Herefords.

**W. READHEAD BROOKDALE FARM MILTON, ONT.**

**Wm. D. Dyer, R. 3, Oshawa, Ont. Brooklin, G.T.R., G.N.R., Myrtle, C.P.R. SHORTHORNS.** Pure Scotch or Scotch topped, beef type, yet good milkers. 3 young bulls, and a few young cows and heifers for sale.

**SHROPSHIRE.** Type and quality. A few ram lambs still left.

**CLYDESDALES.** Stallion, 1 year old, rich in Baron Pride blood, promises size and quality combined

**CREEKSIDE SCOTCH SHORTHORNS**

Herd headed by Gay Monarch 79411, dam, Sally 8th Imp., and sire, the great Gold Sultan 75411. My present offering of young bulls includes several 7 to 14 months' youngsters, all thick, well-grown fellows—reds and roans—and priced right. Can also supply females in most any numbers.

**Geo. Ferguson—Eloa Station, C.P.R., G.T.R.—Salem, Ont**

**IMPORTED SHORTHORN BULLS**

We have several newly-imported bulls of serviceable age — Cruickshank, Marr and Duthie breeding, as well as a number of choice, home-bred young steers, got by our noted herd sire, Proud Monarch, by Royal Blood. Get our prices before buying elsewhere.

**RICHARDSON BROS., Columbus, Ont**

**SPRING VALLEY SHORTHORNS**

Herd of seventy head, straight Scotch, good individuals. Headed by the great show and breeding bull, Sea Gem's Pride 96365, and Nonpareil Ramsden 83423. We have for sale four as good young bulls as we ever had, and a few females.

**KYLE BROS., Drumbo, Ont. (Phone and telegraph via Ayr.)**

**SEVENTY-THREE HEAD OF SHORTHORNS**

Ten young bulls of serviceable age, Nonpareil Ramsden =101081=, and Royal Red Blood =77521=, at the head of the herd. The ten young bulls range in age from 8 to 15 months, and are for immediate sale. They are out of good dams which will bear inspection. Our cows and heifers will please, and you'll like the bulls.

**JAMES McPHERSON & SONS, DUNDALK, ONTARIO.**

**Imported SCOTCH SHORTHORNS**

Our present offering includes 100 imported females and 12 young imported bulls, representing the most desirable lines of breeding. If interested come and see them. Burlington Jct., G.T.R. is only half mile from farm. **J. A. & H. M. PETTIT, FREEMAN, ONTARIO.**

**OAKLAND 60 SHORTHORNS**

Present offering is 7 bulls from 10 to 20 months of age; also a few cows with calves at foot, all choicely bred dual-purpose animals, and priced below their value. Crown Jewel 42nd still heads this herd.

**JOHN ELDER & SONS, HENSALL, ONTARIO.**

**FAIRVIEW SHORTHORNS AND CLYDESDALES**

In Shorthorns we can offer you a choice, from 60 head, including both bulls and females, of Lavender, Missie, Augusta, Duchess of Gloster, Village Girl, Miss Ramsden and Clara breeding—the best of cattle and the best of pedigrees. In Clydesdales, write for our list of winnings at Toronto, London and Guelph 1917 shows, Canadian-bred classes. We also have a nice offering in Shropshires.

**ROBERT DUFF & SONS, Myrtle Station, C.P.R., and G.T.R. MYRTLE, ONTARIO**

**WILLOW BANK STOCK FARM**

Shorthorn Cattle and Leicester Sheep. Herd established 1855—Flock 1848. The great show and breeding bull, Brownale =80112= by Avondale, heads the herd. Extra choice bulls and heifers to offer. Also a particularly good lot of Leicester rams, mostly from imp. ewes.

**JAMES DOUGLAS, CALEDONIA, ONTARIO.**

**MAPLEHURST SHORTHORN BULLS**

We are offering two young bulls, one, ten months old, and the other one year old; both out of big thick, roan cows, tracing to Lavinia, (Imp.) One sired by the Jilt bull, Jilt's Victor =93844=, and the other by Plumside Victor =100492=, a grandson of Baron's Pride =72491=. Write:

**PETER L. GRAHAM, R. R. No. 2, ILBERTON, ONTARIO**

**PURE SCOTCH SHORTHORN BULLS**

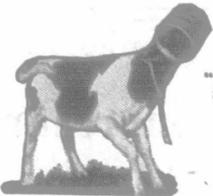
Our present offering of young bulls, sired by our herd sire Broadhooks Star, a son of the great Newton Ringleader, Imp., are the best lot of bulls we ever had on the farm. Come and see them, or write for particulars. We also have females of the richest breeding and highest individuality.

**GORDON SMITH, Woodlee Sta., M.C.R., Essex County, SOUTH WOODSLEE, ONT.**

**ESCANA FARM SHORTHORNS**

For Sale—2 herd-headers of serviceable age; one a Cruickshank Orange Blossom by Right Sort Imp. and one a Jilt, by Raphael (Imp.); also one good farmer's bull. Can also spare a half-dozen females.

**J. F. MITCHELL, BURLINGTON, ONTARIO. Farm ¼ mile from Burlington Junction.**



"Good to the Last Drop"

**Raise Your Calves on Blatchford's Calf Meal and Sell the Milk**

More calves have been raised on Blatchford's Calf Meal than on all other milk substitutes combined.

100 lbs. makes 100 gallons of milk substitute, costing only one-third as much as milk. Prevents scouring and insures the early maturity of sleek, handsome calves.

It is steam-cooked and no trouble to prepare or use.

Write for Pamphlet "How to Raise Calves Cheaply and Successfully with Little or No Milk." At dealers, or Steele, Briggs Seed Co., 64 Toronto, Ont.

**Annual Provincial Sale of Pure-Bred Stock**

The Annual Provincial Sale of Pure-bred Shorthorn Cattle, males and females, 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, on

**Wednesday, March 6, 1918**

Sale to commence at 12.30 P. M.

About sixty head will be offered, among them many fashionably bred animals contributed by well-known breeders.

For catalogues and other particulars apply to

**G. L. Nelles, J. M. Duff,**  
President. Secretary.  
Guelph, Ont.

**Dual-Purpose Shorthorns**

Herd headed by Dominator No. 106224 whose grandam on his mother's side has an R. O. P. record of 13,535 lbs. milk, testing 3.99, and whose dam has an R.O.P. record of 10,689 lbs. milk, testing 3.88. Cows heifers and young bulls for sale; some of the latter are out of cows in the herd which have given between 10,000 and 11,000 lbs of milk each in one lactation period.

**WELWOOD FARM**  
FARMER'S ADVOCATE, LONDON, ONTARIO

**Mardella Shorthorns**

Dual-purpose bulls, 20 young cows and heifers—bred, some calves by side. Size, type, quality; some full of Scotch. The great massive Duke—dam gave 13,599 lbs. milk, 474 lbs. butter-fat—at the head.

Thomas Graham, Port Perry, R. 3, Ont.

**Registered Shorthorn Bulls**

Excellent individuals and ready for service. Sired by the famous bull that sold in Toronto, December last, for \$1,075. These choice young animals possess perfect Gloster type and finish (their dams excellent milkers.) Priced right for quick sale.

**W. S. BRAGG**  
R.R. No. 4, Box 11, Bowmanville, Ont.

**Glenfoyle Dual-Purpose Shorthorns**

Herd bull College Duke 4th, 95430, big, thick young cows and heifers for sale; 8 young bulls, some herd headers. Also a yearling Clyde, stallion.

**STEWART M. GRAHAM, LINDSAY, ONT.**

**FOR SALE.** The following **Scotch Shorthorns**: 3-yr.-old Imp. Augusta bull, Augustine = 107804 =; two good cows with their calves and two heifers; also five bulls, ready for service. Will be sold right away. Inspection invited. **John Senn & Son, Caledonia, R. R. No. 3, Haldimand County.**

**Shorthorns—** Pail-fillers for sale. Young bull and heifers out of high record cows. A few young cows and bulls with extra good breeding and quality.  
**PETER CHRISTIE & SON**  
Manchester P. O. Port Perry, Ont. Co.

**MAPLE LEAF FARM**  
Shorthorns, some good young bulls and females. Shropshires, 50 lambs. Our flock leading winners on Eastern show circuit.  
**John Baker, Hampton, R. No. 1, Ont.**

**Evergreen Hill R. O. P. Shorthorns**  
Offering sons of St. Clare 84598 R.O.P. No. 5, who sired the 1917 champion fat steer at Toronto Exhibition. Also offering Berkshires 2 months old.  
**S. W. Jackson, R.R. No. 4, Woodstock, Ont.**

**Gossip.**

**Shorthorn Sale.**

If interested in high-quality Shorthorns, plan to attend L. K. Weber's sale, at Hawkesville, on March 7. The herd represents such families as the Broadhooks, Nonpareils, Butterflies, and Beatrices. There are twenty-five registered females and eight registered bulls in the sale. The females are not in particularly high flesh but are in good working condition, at the time a representative of "The Advocate" visited the farm. The cows are all regular breeders and good milkers. Many of them will freshen along in April, or early May. The young stuff is thrifty and in good condition. The herd sire, Bull Rush Imp., is a deep, thick, low-set, active animal, and has proven his worth as a breeder. The females trace to Sultana Imp., a cow which was considered good enough at one time to enter a milking contest across the border. Besides the pure-breds there are a number of grade Shorthorns. The farm is located three miles south of Wallenstein on the C. P. R., Guelph and Goderich line; six miles northwest of St. Jacob's, G. T. R., Kitchener and Elmira branch. Write Mr. Weber for a catalogue.

**High-Testing Ayrshires.**

Ayrshire readers of these columns have long been familiar with the quality Ayrshires kept on the farm of Jas. Begg & Sons, St. Thomas, Ont. Mr. Begg has a standard to which he aims with all his herd. His slogan has for some time been a sire whose three or four nearest dams average 4.5 or thereabouts for butter-fat test. In the choice of the present sire he has been particularly fortunate in this respect. We are referring to the young sire, Ross of Fernbrook. This youngster is got by Sir Walter of Springbank, which is a son of the noted champion winner Lessnessock Forest King (imp.), and Snowflake, a 12,616-lb. R. O. P. cow, with 556 lbs. of fat for the year, and an average test of 4.41 per cent. His dam is Queen of Fernbrook, a 9,573-lb. 3-year-old daughter of Star of Glencairn, with an average test of 4.59 per cent. Star of Glencairn, it will be remembered, was a half-brother to the great Jean Armour, the first 20,000-lb. cow of the breed. As yet Mr. Begg has nothing to offer from Ross of Fernbrook but he is being used exclusively, and when mated with the many good record cows in the herd should easily prove one of Canada's best producing sires. The present offering are mostly bulls, including several that are old enough for service, and all are sired by the former herd sire "Senator," whose sire "Garclaugh Prince Fortune," was very closely related to the present world's champion, Garclaugh May Mischief. Every bull offered is from an officially tested dam and is a good individual. Those who are needing a new herd sire would do well to get in touch with Messrs. Begg & Son before buying elsewhere. Let him know your wants, either by mail or a visit to the farm.

**Questions and Answers.**

1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.  
2nd—Questions should be clearly stated and plainly written on one side of the paper only, and must be accompanied by the full name and address of the writer.  
3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.  
4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

**Veterinary.**

**Hound With Tender Feet—Worms.**  
1. When working my fox hound's feet get soon raw, and bleed.

2. What is the best treatment for a dog with worms?  
W. H. S.

Ans.—1 His feet are tender. There is no known means of rendering them tough enough to withstand the continued irritant action of ice and snow. It may be that they will acquire the necessary resisting power during the summer and be all right next winter, but unless protected by boots that can be purchased from some dealers in sporting goods he will be of no use this winter. Dress the raw surface 3 times daily with 1 part carbolic acid to 30 parts sweet oil.

2. Starve him for 18 hours. Then give him 1 grain of powdered area nut for every pound of his weight, and in a few hours give him a purgative of 2 to 4 drams jalap, according to size.  
V.

**Two Extra Cans of Milk**

Royal Purple Stock Specific will increase the daily flow of milk per cow, two to five pounds per day while in the stable. You simply mix this pure conditioner with the other meals you are feeding. Its action aids digestion, purifies the blood and improves the condition of stock.



**Royal Purple Stock Specific**

will put flesh on the poorest, most run-down animal on your farm. We stand back of this guarantee to the extent that we will refund your money if it does not give the desired results when directions are followed. PUT ROYAL PURPLE STOCK SPECIFIC TO THESE TESTS: See if it will increase your milk flow. See if it will improve the condition of run down animals. See if it enables you to market pigs a month earlier. We know it does all these things. We ask you to try it—and benefit by its use. Sold by dealers everywhere in large and small packages.



Made only by  
**W. A. Jenkins Mfg. Co., Limited**  
London, Canada

**FIFTY IMPORTED SHORTHORNS**

I have fifty head of newly imported Shorthorns (42 females, 8 bulls) which are acknowledged to be one of the strongest lots that have left Britain this season. You should see these if you are wanting something choice. **George Isaac, (All Railroads; Bell Phone) Cobourg, Ontario.**

**IRVINEDALE STOCK FARM**

Herd headed by Marquis Supreme. For sale, 4 granddaughters of (Imp.) Right Sort, two are Scotch and two Scotch topped; also two bulls, 1 roan 16 months by Gainford Select, and one white, Scotch topped sired by Browndale, 7 months old, priced to sell.  
**JOHN WATT & SON, G.T.R. & C.P.R. R.R. NO. 3, ELORA, ONTARIO**

**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, ONTARIO. Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.**

**SHORTHORN BULLS Will. A. Dryden**

of my own breeding, around a year old; best families and good colors, are for sale. Also a few young, imported bulls.  
**Brooklin, Ontario County Myrtle, C.P.R., Brooklin, G.T.R., Brooklin, C.N.R.**

**A. G. Farrow, Oakville—SHORTHORNS**

Herd headed by Proud Lancer (Imp.) and Pride of Escana, a great son of the great Right Sort Imp. I have a few bull calves of the better sort. Three imported ones left. Prices right.  
Farms one mile from station. Trains every couple of hours each way.

**MEADOW LAWN SHORTHORNS**

Three big, growthy bulls of serviceable age—one of the Claret, two of the Marr Roan families. Come and see them. We will refund your railway fare and pay freight on all purchases. Priced from \$175 to \$300. - **F. W. EWING, R. R. No. 1, ELORA, ONT.**

**Robert Miller, Stouffville, Ont.**

still has a few Shorthorn bulls, fit for service, and some females that are as good as 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

**SALEM SHORTHORNS**

Herd headed by Gainford Marquis (Imp.), undefeated in England and Canada. Sire of the winning group at Canadian National, 1914, 1915, 1916. Can supply cattle, both sexes, at all times.  
**J. A. WATT, ELORA, ONTARIO**

**SHORTHORNS—T. L. Mercer, Markdale, Ont.**

**ROSEWOOD CHAMPION**, by Nonpareil Archer, Imp., at the head of the herd. I have almost 100 Shorthorns in my stables at present. Marr Missies, Campbell-bred Clarets, Nonpareils, Minnas, Rosemarys, etc.—the best of breeding and the best of cattle; bulls or females; also have a few Herefords.

**PURE SCOTCH SHORTHORNS**

of exceptional merit. The young things we are offering this year are something extra, especially the bulls. Come and see them if you want something choice. **GEO GIER & SON, WALDEMAR, ONT.**

**Blairgowrie Shorthorns and Shropshires**

20 imported cattle, cows and heifers; all have calves at foot or are in calf to British service. Bulls for breeders wanting herd headers. Also home-bred bulls and females. Prices right. Rams and ewes in any numbers. **JOHN MILLER, Myrtle Station, C. P. R., G. T. R. ASHBURN, ONTARIO**

**PLEASANT VALLEY FARMS**

Herd headed by (Imp.) Newton Grand Champion and Belmont Beau. We have for sale a goodly number of real good young bulls that will suit the most exacting; also females. Inspection invited.  
**Geo. Amos & Sons, C. P. R., 11 miles east of Guelph Moffat, Ontario.**

**SUMMER HILL HOLSTEINS**

A number of choicely-bred bulls. One a real show bull, beautifully marked, dam a 30.76 junior four-year-old; sire's dam 34.60. The three nearest dams average over 100 lbs. milk a day. Can spare a few good heifers and cows.  
**D. C. FLATT & SON, R. R. 2, HAMILTON, ONT.**

Complete Dispersion Sale OF FORTY HIGH QUALITY

Purebred Holsteins

Friday, March 15th, 1918 AT NORWICH, ONT.

Sale will commence at 1 o'clock. Farm, 1 1/2 miles east, 1/2 mile south of Norwich.

This is a choice lot, all being young, only 3 pure-breds over 6 years of age. Practically all those of milking age will be fresh and some will be bred again to Lady Pauline's Sir Sylvia, the junior sire. All cows fresh since November are entered in the R.O.P. test. One four-year-old gave 2,480 lbs. in 30 days, some others from 2,100 to 2,400 lbs. of high-testing milk in December and January, and keeping up a like flow in February. Quite a number have good R.O.M. records.

Included in this sale are Aaggie M. Posch, 20.04 lbs. butter, 506 lbs. milk at 2 years, also two of her daughters, her bull calf, her dam and sister; a 23.93-lb. 2-year-old with 542 lbs. milk in 7 days, 81 lbs. in 1 day, 1,019 lbs. milk and 44.72 lbs. butter in 14 days; also two of her daughters, one sired by a \$2,000 son of the \$50,000 bull; a 23.16-lb. junior 4-year-old and two of her daughters; the first-prize cow at Guelph, 1917, with 25.06 lbs. butter, 546 lbs. milk in 7 days, 82 lbs. in one day; her bull calf and granddaughter, also four of her sisters; a 16.22-lb. 2-year-old and her two sisters, from the same cow, one with 13.40 lbs. butter in 7 days, at 22-months old.

The young herd sire, as well as the females, combine show qualities with heavy production. The entire offering will be sold without reserve.

Conveyances will leave Duke House, Norwich, at 12.30 on day of sale.

CATALOGUES ON APPLICATION TO

H. C. HANMER, Proprietor, Norwich, Ontario Or T. M. CALEY, Secretary, Norwich, Ontario MOORE & LONGWORTH, Auctioneers

45 HEAD 45 HEAD

WE INVITE YOU TO ATTEND THE LONDON DISTRICT HOLSTEIN BREEDERS' CLUB

FIRST CONSIGNMENT SALE, to be held in the City of LONDON, at the BRUNSWICK HOTEL STABLES, Corner of York and Talbot Streets, on

Thursday, March 14, 1918

Some of the choicest animals of the Black and White breed will be offered. There are daughters and sons of Funderne King May Fayne, the 34-lb. bull, owned by Lipsitt, Laidlaw and Holtby; granddaughters of the great King Segis, son of a 31-lb. bull; daughters of Judge Hengerveld 8th, whose dam, at 5 yrs., made 32.92 lbs. of butter in a week. Also near descendants of the \$50,000 bull, King Segis Pontiac Alcartra. The females will all be young cows and heifers, no three teaters or slack quarters, the majority of them milking or due to freshen soon, and right in every way. If you want something choice in Holsteins do not fail to be on hand at 1 p.m., on MARCH 14th, 1918. Catalogues will be ready on the 1st. of March—write the secretary for one.

FRED BODKIN, R. R. No. 2, Wilton Grove, Ont.

L. LIPSITT, Stratfordville, Sales Manager

T. MERRITT MOORE, Auctioneer

HIGHLAND LAKE FARMS

Herd sire, AVONDALE PONTIAC ECHO, (under lease), a son of MAY ECHO SYLVIA, the world's record cow. Only one other 41-lb. bull in Canada.

We have young bulls for sale whose two nearest dams (both Canadian champions) average as high as 35.62 lbs. butter in seven days; another whose two nearest dams are both 100-lb. cows, and one ready for service, from a 41-lb. sire and an 18,000-lb. two-year-old dam. Send for our BOOK OF BULLS. A few females for sale. Satisfaction guaranteed.

R. W. E. BURNABY, (Farm at Stop 55, Yonge St. Radial) JEFFERSON, ONT.

KING SEGIS WALKER'S DAUGHTERS

STILL MAKING LARGE RECORDS

If you want a young bull let me send you some photos and pedigrees. A few females left.

A. A. FAREWELL, OSHAWA, ONT.

LOW BANKS HIGH-RECORD HOLSTEINS. Only one bull left of last season's entire crop of calves. He is a beauty—straight as a string. Dark colored. His dam, "Hester Pietje Netherland" record 30.14 lbs. butter in 7 days, and her first two daughters have each made over 19 lbs. butter in 7 days as junior two-year-olds. Remember—his sire is a son of Pontiac Korndyke, and his ten first daughters tested average 19.64 lbs. butter and 436 lbs. milk at an average age of 2 years and 17 days. He won't be here long. Write for pedigree and price. K. M. DALGLEISH, KENMORE, ONTARIO

LLENROC STOCK FARM

On the Boulevard of the Beautiful Niagara River

We offer a fine young bull from our senior sire and from a 29-lb. cow; also a young bull from Sir Veeman Hengerveld and from a 15-lb., 2-year-old, who is a granddaughter of Diana Konigen Pietertje, 37-lb. Write for prices and pedigrees. Address

W. C. HOUCK, R. R. No. 1, CHIPPAWA, Ontario.

EVERGREEN STOCK FARM HOLSTEIN-FRIESIANS

Our unparalleled success at the Toronto and London Exhibitions during the past five years places Evergreen Holsteins in a class by themselves. The strong combination of size and type found in our individuals makes record producers. Your next herd bull should be carefully selected. See our offering before buying elsewhere. A. E. HULET, (Oxford County) NORWICH, ONT.

WILLOWBANKS HOLSTEIN-FRIESIANS

Herd headed by King Walker Pride (C. H. B., 17362), (A. H. B., 207261) who is a son of the famous King Walker and the great show cow, Pride Hengerveld Lennox, 30.12, who is a granddaughter of Blanche Lyons De Kol, 33.31 and King Segis, who is a grand sire of world-champion cow, also of the two highest-priced bulls of the breed. Young stock for sale. C. V. Robbins Bell Phone Wellandport, Ontario

Gossip.

Fairview Farm Holsteins.

The Fairview Farm dispersion sale of Holsteins, on March 5, at the farm of E. C. Chambers & Sons, Hatchley, Ont., will include many high-class individuals. Most of the females of breeding age have been bred to King Segis of Forest Ridge 10th, and will freshen shortly after the sale. This is an opportunity to secure calves from a sire whose dam and sire's dam made over 30 pounds of butter in seven days. Included in the offering are: Forest Ridge Segis Bessie, and Mollie Leigh Posch, each with over 25 pounds of butter in seven days. A daughter of the latter cow has recently made a 22.16 record. Bessie Colanthus has a record of over 20 pounds of butter. There is also a granddaughter of Vikinia Johanna, the fourteen-year-old cow that made 39 pounds of butter in seven days. There are seven heifers rising one year old from the present herd sire, and three granddaughters of Pontiac Korndyke, all from tested dams. This is but an indication of the breeding you secure when you purchase Fairview Farm stock. Write E. C. Chambers, Hatchley, for a catalogue giving description of stock in detail.

H. C. Hanmer's Holsteins.

You will find a combination of show type and heavy production in H. C. Hanmer's herd. The highest-scoring Holstein at Guelph Dairy Test was from this herd, and the same cow, Flora De Kol Pietertje 2nd, gave 1,104 lbs. milk in 14 days in November, 2,286 lbs. in December, and around 2,300 lbs. in January. She has a seven-day record of 25.04 lbs. A stabledmate gave 1,737 lbs. milk in November, 2,067 lbs. in December, and 2,100 lbs. in January. Her heaviest day's milking was 77 lbs. Aaggie M. Posch, another stabledmate, gave 2,236 lbs. milk in December. Her best day was 91 lbs. This is but a sample of what the cows Mr. Hanmer is offering to you can do. The records to date of sale will be given and papers handed over to the purchaser so that he may continue the test if he so desires. An eight-year-old cow in the herd was dry last fall for the first time, which shows her to be a per-

Springbrook Holsteins to Disperse

Our lease has expired, and at the farm, 3 miles from Gormley Station, C. N. R., and 6 miles from Stouffville Station, G. T. R., on

Thursday, March 7, 1918

We will dispose by auction of our entire herd of 35 head, consisting of 28 females with records ranging from 13.38 lbs for two-yr.-olds to 23 lbs. for three-yr.-olds, and 7 bulls, including our herd sire, Inka Sylvia Bos, a brother to the great May Echo Sylvia, 41-lb. butter, R.O.M., 152 lbs. milk in one day, and Lawncrest May Echo Posch, 33.78 lbs. R.O.M. One of the young bulls of serviceable age is out of an 18-lb. senior yearling and sired by Johanna Hengerveld Segis, a 30-lb R.O.M. and 100 lbs. milk per day bred son of the intensely-bred Sir Lyons Hengerveld Segis.

A number of the offering are daughters of these great bulls, and these daughters are bred to Korndyke Geiske Raymondale, sired by a son of May Echo Sylvia, and out of a 25.27 lb. 2-year-old.

TERMS: CASH OR 8 MONTHS ON BANKABLE PAPER WITH 5% FOR CATALOGUES WRITE:

SHERRICK BROTHERS - - - BETHESDA, ONTARIO T. MERRITT MOORE, SPRINGFIELD, AUCTIONEER

On morning of sale conveyances will meet morning trains at Gormley Station, C.N.R., Stouffville, G.T.R. and Schomberg Junction on Yonge St. at 10.30.

Unreserved Dispersion Sale

Thirty-Five Pure-Bred Holsteins

The Entire Herd of Noah S Bender Selling at the Farm Near

Tavistock, Ont., Tuesday, March 19th, 1918

Thirty-two females, twelve milking cows; not one defective udder, a good clean herd. Ten daughters of King Lyons Colantha, six daughters of King Lyons Hengerveld and with one exception, all bred on the farm. Watch this space for further particulars, and write for catalogue.

NOAH S. BENDER, TAVISTOCK, ONT.

Pioneer Farm Holstein Herd With big yearly records and high average butter-fat test, and headed by Canary Hartog, grandson of Royalton Violet, at 10 years, 30.39 lbs. butter, 735 lbs. milk in 7 days; 29,963 lbs. milk, 1,300 lbs. butter in 1 year. Sire's dam, Royalton De Kol Fern, 34.60 lbs. butter in 7 days, 116 lbs. milk in 1 day. Bull calves for sale, born after Jan. 25th, 1917; dams over 11,000 lbs. milk up to nearly 16,000 lbs milk in 1 year, at 2 years old. Walburn Rivers, R. R. No. 5, Ingersoll, Ontario. Phone 343L, Ingersoll Independent Line.

Riverside Holsteins

We still have some good bulls on hand, including two half-brothers of Toitilla of Riverside, former Canadian R.O.P. Champion. Write or phone your wants to—J. W. Richardson, Caledonia, Ont.

sistent milker. She has the capacity and constitution to stand heavy production and is a regular breeder, as she has dropped six heifer calves. A ten-year-old cow, Lady Abbekerk M. Posch, has dropped a heifer calf every year since she was a two-year-old, and her dam had 13 heifer calves straight and then a pair of twins. The junior sire, Lady Pauline's Sir Sylvia, is an attractive individual with splendid type and character. His backing compares favorably with the best. He is sired by a grandson of May Echo Sylvia. His dam is a 20-lb. three-year-old daughter of a 34-lb. cow, and his four nearest dams average nearly 30 lbs. of butter. There are 6 yearling daughters of Butter Baron Posch A, a son of Butter Baron from a record daughter of Cornelius Posch. Five calves are sired by Prince Echo Sylvia, and there are two daughters of Prince Colantha Abbekerk. A few of the cows freshened in the fall and will be bred to the junior herd sire. Practically all the females of breeding age will be in milk at time of sale. Everything advertised will be sold without reserve. See advertisement in this issue. It is an opportunity for anyone wanting some right good Holsteins. The sale is held at the farm on Friday, March 15. Write H. C. Hanmer, Norwich, Ont., for a catalogue, mentioning "The Farmer's Advocate." Norwich is located on the G. T. R. line and is accessible from all directions.

Questions and Answers. Veterinary.

Lame Horse.

I have a 1,700-lb. horse that is lame in his pastern joints, both front and rear. Is this due to weak joints? Will you prescribe a good liniment for sprains, swellings, etc.?

Ans.—If you are correct in your diagnosis of the seat of lameness it is due to weak joints. The following makes a good liniment for the purposes mentioned: viz., Tincture of iodine and tincture of arnica, and oil of turpentine, of each 2 fluid ounces, gum camphor 1 ounce, extract of witch hazel 6 fluid ounces, and alcohol to make one quart. This makes a strong liniment, but can be weakened to any desired strength by the addition of water.



**MANOR FARM HOLSTEINS**

**AS GOOD AS VICTORY BONDS. Bull Calves Ready for Service.**

<b>No. 1.—Born April 2nd, 1917.</b>	
Dam, Manor P. H. Vincent.....	5 years.....22.87
Half Sister to Manor P. H. Flower.....	30.59
Grandam Lady Vincent.....	29.57
(World's record when made)	
<b>No. 2.—Born May 18th, 1917.</b>	
Dam, Manor P. H. Tensen.....	2 years.....14.22
Half Sister to Manor P. H. Flower.....	30.59
Grandam Tensen of Elmwood.....	22.45

Both sired by King Segis Pontiac Posch

FFI have got to make room so these attractive young fellows are priced way below value, and will more than bring you 5 1/2% on your investment. **DON'T DELAY BUT WRITE AT ONCE.**

**GORDON S. GOODERHAM, CLARKSON, ONT.**

**IMPORTANT BREEDERS' SALE**

Thirty-Four

HOLSTEINS

Pure-Bred

SELLING AT OURVILLA FARM, AYLMEER, ONTARIO

**MARCH 13th, 1918**

**Brother Holstein Breeders:—**  
In this offering of 30 milking females and 4 young bulls, all carefully selected from our own breeding herd, we believe we have one of the strongest lots of breed-cattle that will be seen in any public sale ring this season. The cows are all young, those that have not been tested are all from tested sires and dams, and the majority are either now milking or due in early spring. A great many are granddaughters of the noted sire Dutchland Colantha Sir Abbekerk, and these are

**Thirty Milking Cows  
Four Young Bulls**

Every Animal Born at  
**OURVILLA FARM**

bred to one of our two sires, Maplecrest De Kol Champion or Finderne King May Fayne. The former is a full brother to the one time world's record cow Banostine Bell De Kol, and the latter is a brother to Finderne Holigen Fayne, who at one time held all world's records both milk and butter, (3-year form) from one day to one year.

The young bulls offered are all nearing serviceable age. Three are by the Maplecrest bull, while the fourth and last is by the Finderne sire.

Write Now for Catalogue. Remember This is Distinctly a Breeders' Sale.

LAIDLAW BROTHERS, AYLMEER, ONTARIO

Note: The Sale will be held the day following the Van Patter Sale. Come and stay over for both sales.

**SILVER STREAM HOLSTEINS**

Present Offering — six extra well bred bull calves, sired by bulls with 34-lb. backing, and from tested dams, individually as good as their breeding. For fuller particulars and prices, write, or better come and see them.

J. MOGK & SON, R. R. 1, TAVISTOCK, ONTARIO

**LYNDALE FARM—Offer No. 2.**

Last week we offered a 12-months son of *Champion Echo Sylvia Pontiac*, and this week we want to mention specially a 10-months grandson of the great King Segis, from a granddaughter of Sara Jewel Hengerveld 2nd B, 30.11 lbs. of butter in 7 days. A good individual and priced right.

BROWN BROTHERS, LYN, ONTARIO

**Gossip.**

**Holsteins at Woodland Farm.**

J. M. Van Patter and Sons are offering a choice lot of breeding female Holsteins and a few young bulls by auction at their farm near Aylmer, on Tuesday, March 12. The cows in milk are all big-framed, typey, strong-constituted animals. The young stuff is growthy and thrifty. Practically all the cows above two years old have been tested and made creditable records. The heifers are all daughters and granddaughters of 20-lb. and over cows. Along with size the cows have every indication of being heavy producers. The udders are well balanced and of fine quality; veining is very pronounced on most of them. King Aaggie Fayne, the junior sire, is a promising individual, sired by Finderne King May Fayne and has for his dam Aaggie Mercedes, 29.19 lbs. butter in 7 days. His dam and sire's dam average 31.56 lbs. in 7 days. There are many granddaughters of Netherland Aaggie De Kol, ex-champion R. O. P. cow, record 21,666 lbs. milk and 881 lbs. butter, and of her sister Aaggie Mercedes, a former Canadian champion, a particularly fine one being Queen Mercedes Melba with a 22.81-lb., 3-year-old record and 93.16 lbs. in 30 days. An idea of the quality of the herd can best be conveyed to Holstein breeders by citing the breeding and records of a few individuals. There are three 20-lb. daughters of Woodland Sarcastic Lad, one being Woodland Queen De Kol, a fine cow with a 23.12-lb. record, and 16,107 lbs. milk and 714 lbs. butter as a 3-year-old. Another good one is Arrawanah Posch 2nd with a 7-day record of 21.49. Her dam's sire is a brother to Pontiac Korndyke. Both these cows have splendid bull calves 10 months old in the sale. Lady Jongste, a 20-lb. granddaughter of Vida Princess 4th, with 18,483 lbs. milk and 753 lbs. butter in R. O. P. Woodland Colantha Mercedes, a 20.16-lb., 3-year-old, a daughter of Dutchland Colantha Sir Abbekerk, which has two other daughters in the sale, one with 23.30 lbs. in 7 days, and 93 lbs. in 30 days at 3 years. Nine of the cows have records averaging 22.37 lbs. butter in 7 days, many of them, including Aaggie Mercedes, freshen about sale time. One of the outstanding heifers is Woodland Banostine Princess, which made 17.50 lbs. butter in 7 days at 2 years 1 month. She is sired by Maple Crest De Kol Champion, the senior herd sire, now owned jointly by Van Patter & Sons & Laidlaw Bros. His first and only two tested daughters average 18.42 lbs. butter at 2 years 3 months. This great

**Great Dispersion Sale**

**FAIRVIEW TUESDAY, MARCH 5, 1918**

**Stock Farm** at 1 o'clock

**Why?**

1. Because the herd sire is the first bull to be offered by public auction in Western Ontario whose dam and sire's dam made over 30 lbs. in 7 days.
2. Because there is more 30-lb. blood in the herd.
3. Because there are more daughters of a 30-lb. bull.
4. Because there are more cows in calf to a 30-lb. bull than ever offered at public auction.

**E. C. CHAMBERS offers his entire herd of 32 richly-bred, heavy-producing, high-quality Holsteins for sale without reserve.**

The highest-priced animals at the Brantford Consignment Sales were from Fairview Stock Farm—their daughters are now being offered. Cows fresh or springing at time of sale.

**Remember! It is 30-lb. Breeding**

Sale held under Cover

Parties wishing to attend sale can reach farm by G.T.R. to Harley, T.H. & B. to Scotland, or L.E. & N. to Oakland. Conveyances will be at Harley station, and hotel at Scotland, on morning of sale. Bus meets radial at Oakland and train at Scotland. Rigs will leave hotel for farm at 11 a.m. - - - - Catalogues may be had on application to:

**E. C. CHAMBERS, HATCHLEY, R. R. 1, ONT.**

Auctioneer, COL. WELBY ALMAS      Sale Manager, L. H. LIPSITT  
Clerks: N. P. Sager and W. J. McCormick

**Roycroft Farm Holstein-Friesians**

Our 30-lb. bulls have all been sold, but we still have several sons of Pontiac Korndyke of Het Loo, that are just nearing serviceable age. Get one of these for your next herd sire, have a brother of Het Loo Pietertje, the world's greatest junior two-year old, at the head of your herd. We also have a Mona, by Dutchland Colantha Sir.

W. L. SHAW - ROYCROFT FARM - NEWMARKET, ONTARIO.  
Take Yonge Street Radial Cars from N. Toronto

DUMFRIES FARM HOLSTEINS

Present Offering—A few bull calves.

S. G. & ERLE KITCHEN
ST. GEORGE, ONT

MAPLE SOIL STOCK FARM OF HOLSTEINS

I am offering a few choice heifers, sired by King Segis Pietertje, that have just been bred to Finderne King May Fayne; also some heifers and cows due to freshen all the way from February until April. All bred to Finderne King May Fayne; a few heifer calves sired by Finderne King. Get some good ones

H. C. HOLTBY
R. R. No. 1
GLANWORTH, ONTARIO

bull has the distinction of being the only son of the only cow in the world who has produced two daughters each to make over 1,320 lbs. butter in a year. Four of his sisters have an average record of 1,279.6 lbs. butter. There are 17 daughters and 4 sons of this sire in the sale. They are descended on the dam's side from Netherland Aaggie, the old foundation cow, who had three daughters and a daughter of each to produce an average of 16,323 lbs. milk and 668 lbs. butter in R. O. P. The above shows that Messrs. Van Patter have a working herd and it is in good condition. Owing to scarcity of help the 2-year-olds have not been tested. A number of the herd have been tubercular tested and there were no reactors. All the stock advertised will be sold without reserve. If looking for foundation stock or a herd sire it will be to your advantage to attend this sale. Aylmer is on the G. T. R. and M. C. R. lines, only a few miles out of St. Thomas. Write J. M. Van Patter & Sons, R. R. No. 1, Dunboyne, for a catalogue, mentioning "The Farmer's Advocate."

**Durham County Holstein Breeders' Club.**

The Durham County Holstein Breeders' Club recently held their annual meeting and a banquet. The afternoon and evening sessions both proved to be very interesting. There was a large number of breeders present. The speakers were R. W. E. Burnaby and R. M. Holtby. The following officers were elected: Pres., S. Jose, Newcastle; Vice-President, A. J. Tamblin, Orono; Secretary-Treasurer, A. A. Gibson, Newcastle.

Jos. O'Reilly, of Peterboro, writes that he has recently made a number of good sales through "The Farmer's Advocate." A. J. Chisholm, of Alexandra, secured a son of Burkeyje Hengerveld May Echo, a cow that has since made over 29 pounds of butter as a junior three-year-old. A grandson of Toitilla of Riverside, the Canadian champion cow, was purchased by A. Stewart, of Guelph, and W. B. Poole, of Ingersoll, got a six-months-old son of the 25,000-lb. cow, Calamity Johanna Nig. A calf was shipped to A. C. Eatery, of Upper Keswick, N. B. Sales have been made in different parts of Ontario and in Quebec. Mr. O'Reilly secured an exceptional record from Toitilla of Riverside, and is also making high records with a number of his other cows, having several in the herd giving over 20,000 pounds of milk, and has a three-year-old with over 29 pounds of butter in seven days.

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**Questions and Answers.**  
**Miscellaneous.**

**Marking Cattle.**

Every year we put a number of cattle out on pasture with other herds, but in the fall we have difficulty in separating them. Would you recommend the use of ear tags? Where could the same be procured?  
H. M. R.

Ans.—Ear tags are a means of marking animals; besides a number, the farm name can be included on the tag. There are one or two firms advertising the same in our columns.

**Draining Boggy Land.**

There is a streak of springy land across a field on our farm that we have not been able to work. It is black, sandy loam and should be suitable for some crop but we have not been able to plow it, for the horses mire so. It is on a ridge with from ten to fifteen feet of a drain to a spring creek about eight or ten rods away. There are no springs within six rods of the creek.

1. Which would be the easiest way of fitting it up for usefulness, since men and means are so scarce?

2. How deep should drains be dug if they are the best and only remedy?

3. Would a row of willows help to dry it up? How large should they be to plant to be satisfactory?

4. Would it be necessary to add other soil when it is so spongy?

5. What besides celery would grow well on soil of this kind? Would sunflowers grow?

6. Have carrots any food value when boiled with potatoes for pigs or chickens?

7. What are some of the perennials that will blossom freely from spring until autumn? The soil is light and has plenty of sunshine.  
W. MCK.

Ans.—1. With soil of this nature and conditions as stated, tile draining would be about the only practical means of bringing it into workable condition. If the springs are on the side of the ridge, it would be necessary to run the tile along the ridge just below the springs and empty into the creek.

2. The depth of the drain will depend on what fall can be obtained, but about 2½ feet should be about right. We do not like to put them much shallower, unless it is in heavy clay soil.

3. We would not approve altogether of planting willows. They might use up a considerable amount of the water, but we do not think they would aid in making the soil workable.

4 and 5. If it is only a narrow strip, heavier soil might be plowed on to it and mixed with it, but if the drains were put in the soil should not be so spongy. However, the springs may supply more water than can be carried away by the tile, especially at certain times of the year. Celery, cabbage, in fact a good many of the vegetables could be grown satisfactorily. No doubt the sunflowers would grow.

6. Carrots have a certain food value but are most frequently used for horses and cattle. In this case they are not boiled.

7. Very few plants bloom continuously, but by planting a variety of perennials, flowers can be had from spring until fall. A few of the plants which make a good showing are: Tall Larkspur, Bleeding Heart, Perennial Phlox, Hybrid Roses, Peonies, Perennial Anemones, Fox Gloves, Holyhocks, Oriental Poppies, Rock Cress, Pinks, Sweet William, Canterbury Bells and Gaillardia. Some of the above-mentioned are really biennials, but they keep coming up each year from seed.

**Veterinary.**

**String Halt.**

Driving mare when walking lifts one hind leg high with a jerk. She does the same in the stall. After being out for a while she goes all right.  
G. E. J.

Ans.—This is a nervous trouble, a form of chorea known as "string halt." It usually is a progressive disease, gradually becoming more marked, and the symptoms are usually more marked in cold than in warm weather. In some cases the administration of 3 drams of bromide of potassium gives good results, but in many cases medicines have no effect. An operation, which consists in the removal of a portion of a tendon in the region of the hock, effects a cure in some cases. It requires a veterinarian to operate. V.

**The Quaker's Stock Farm**

ENTIRE DISPERSION SALE OF

**50—Pure-Bred Holstein-Friesian Cattle—50**

<p><b>FEMALES</b> FORTY OR MORE, INCLUDING</p> <p>Shadelawn Cynthia Canary, 4 years, milk 604.7 lbs., butter, 26.37 lbs. Maud Beets Segis, butter, 23.80 lbs. Bella A. Posch, butter, 19.45 lbs. Roxie Fayne, 3 years, butter, 19.87 lbs. Mercena Schuiling 5th, 3 years, butter, 19.71 lbs. Colantha Mercedes Tehee, 2 yrs., butter, 12.77 lbs. The Quakeress, 1 year 11 months, butter, 14.60 lbs.</p> <p>Many other fine foundation cows, tested and untested, and nearly all in shape for testing this spring.</p>	<p><b>ONE OF OXFORD'S FINEST HERDS</b></p> <p>A SALE WORTH WHILE</p> <p><b>HEIFERS</b></p> <p>Some splendid heifers, freshening to the herd bull this fall, and a number of unbred yearlings.</p> <p>Splendid Foundation Stock</p>	<p><b>BULLS</b></p> <p>The young herd sire and show bull, 2 years old, COLANTHUS POSCH ABBEKERK, more white than black. Dam, milk, 7 days, 590.8 lbs., butter, 28.07 lbs. Sire's dam, milk, 710 lbs., butter, 31.95 lbs. Highest day's milk, 103.6 lbs. Average (dam and sire's dam) milk, 7 days, 650.04 lbs.; butter, 30.15 lbs.</p> <p>Blue Ribbon Bull at Guelph, 1916 Prize-winner at Toronto and London, 1917. Several young bulls, ready for service, all from R.O.M. dams. One prize-winner at Toronto, 1917.</p>
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DR. RUDD'S SALE STABLE

**WOODSTOCK, WEDNESDAY, MARCH 6, 1918.**

Convenient Train Service      Terms: Cash or 6 months' credit with interest      Good Hotel Accommodation  
G. F. MAHON, Proprietor, WOODSTOCK, ONTARIO  
MOORE & DEAN, AUCTIONEERS

Write for Catalogue

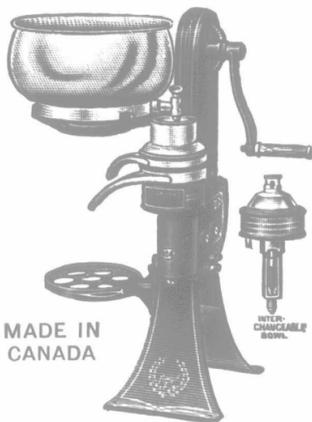
**Practical Patriotism!**

IN these times of national stress, the country implores the people to conserve every resource. Keeping your money investments confined to Canada is splendid patriotism, and good, sound business, too. Besides, you can easily prove to yourself that it is profitable patriotism for you to invest in the



—the machine that is entirely made and designed in Canada by Canadians.

The Renfrew saves one-half pound of valuable cream per cow per week over other machines. By its unequalled close skimming it gets all but one-tenth pound of butter-fat from 1000 pounds of milk skimmed, while other separators lose one-half to a whole pound.



MADE IN CANADA

The Renfrew's close skimming is proven by Government Dairy School tests. We are always glad to have the Renfrew tested beside any other separator, wherever made.

Send for interesting literature, describing the Renfrew self-oiling system, low supply can, interchangeable capacity and other features that are creating big demand for this made-in-Canada machine all over Canada, in the United States and other countries. Write to-day.



"The Canadian farmer hands his money to the Canadian manufacturer, who in turn pays wages to his employees. The money is then turned over to the Canadian merchant for produce bought from the Canadian farmer. Therefore money paid out by the Canadian farmer for Canadian-made machinery comes back to him in actual cash, and in the form of better markets for his produce. Money paid for foreign-made machines is immediately sent out of the country, perhaps never to return."

**NOTICE:** The Renfrew Separator illustrated here was formerly sold under the name "Standard", which identified it as a high efficiency cream separator. The name "Renfrew" has been used on the same machine for several years for our United States and foreign trade and under that name has become as popular in those markets as under the name "Standard" in Canada. Now the name "Renfrew" has been adopted for Canada so as to link the name more closely with that of our company and so that we can sell the machine under a uniform name throughout the world.

**The Renfrew Machinery Company, Limited**

Eastern Branch: Sussex, N.B.      Head Office and Works: Renfrew, Ont.  
U.S.A. Branch: Milwaukee, Wis.      Agencies Almost Everywhere in Canada.      10

**Hospital for Insane, Hamilton, Ont.**

ONLY THREE BULLS LEFT

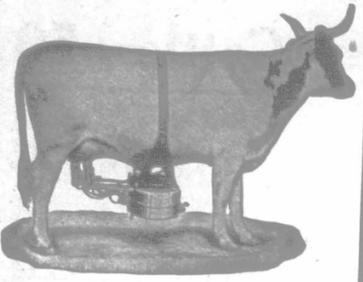
- (1) A splendid fellow, more white than black, born May 1917. He is a grandson of Dutchland Sir Mona, and his dam is a half sister of the famous Toitilla of Riverside.
- (2) Born September and December, 1917, of A. I. R.O.P. dams.

APPLY TO SUPERINTENDENT.

**Linseed Oil Cake**  
"Maple Leaf" Brand

The best supplementary feed for live stock, and the "Veterinarian," the best book on the treatment of Diseases in Cattle. This book sent free with a trial ton order of Oil Cake. Write to-day for lowest prices.  
Canada Linseed Oil Mills, Limited  
Toronto and Montreal

## The OMEGA Milking Machine



has been installed in the private dairy of H. M. King George V. at Windsor Castle and also at His Majesty's private estate at Sandringham. The OMEGA, in a 17-day test on ten cows, (against 17 previous days) at the O. A. C. Guelph, increased the milk flow 206 pounds, or 3 per cent.

### Cleanly and Efficient

The OMEGA is the only machine that draws the milk from the teats through stiff transparent celluloid tubes to the pail which is suspended from the cow. (See cut). The post cannot be kicked over and the teat-cups cannot fall to the floor and suck up straw or manure. There are no rubber tubes in the OMEGA to crack and harbor germs. The OMEGA is simple in design and easily cleaned.

### WRITE TO-DAY

for Free booklet describing the many exclusive and desirable features of the OMEGA.

**C. RICHARDSON & CO.**  
St. Mary's Ontario.

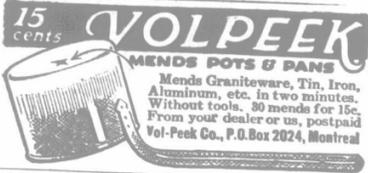
## FEEDS

Cotton Seed Meal, Linseed Oil Cake Meal, Corn Oil Cake Meal, Gluten Feed, Digestive Tankage, Vim or Oat Feed, Bran, Shorts, Corn, Cracked Corn, Corn Meal, Feed Wheat, Scratch Feed, Laying Mash, Fattening Mash, Beef and Bone Scrap, Oyster Shell, Poultry Grit, Alfalfa Meal, Charcoal, etc.

If it is in the Feed Line, we have it. Write or phone for prices.

We are also buyers of Buckwheat, Oats, Goose Wheat, Barley, Peas, Beans, etc., both for feed and seed. Also Hay, Straw, Potatoes, Cabbages, Onions, Shallots, and Dutch Sets, etc.

SEND SAMPLE AND STATE QUANTITY  
**CRAMPSEY AND KELLY**  
DOVERCOURT ROAD, TORONTO



FOR SALE

## Two Dual-Purpose HOLSTEIN BULLS

One two-year-old. Dam, officially tested gave as a four-year-old, 11,498 lbs. milk and 434 lbs. butter fat. One year-old, whose dam as a three-year-old also officially tested, gave 8,057 lbs. milk and 340 lbs. butter fat in 296 days.

**D. Z. GIBSON,** Caledonia, Ont.  
**For Milk, Butter, Cheese, Veal, Holstein Cows Stand Supreme**  
If you try just one animal you will very soon want more.

WRITE THE  
**HOLSTEIN-FRIESIAN ASSOCIATION**  
W. A. Clemons, Sec'y. - St. George, Ont.

**Garden of Oxford, Holstein-Friesians Choice Bulls;** I have six extra good, strong and vigorous young bulls of serviceable age, three being sons of the Prince Colanthus Abbekerk, one the son of King Segis Alcartra Calamity, and the other two the sons of King Lyons Hengerveld. These are all from good dams of high test and would prove a valuable asset at the head of anyone's herd. Prices reasonable. Apply to, or come and see them at Tavistock, Ontario.  
**JOHN G. MORGENTHAU, Rural Route No. 6.**

**TUESDAY, MARCH 12**  
**J. M. Van Patter & Sons**  
**Holstein-Friesian Sale**  
WOODLAND FARM, AYLMEER  
See ad. next week, and reader in this issue.

## Questions and Answers. Miscellaneous.

### Tilling the Soil.

After giving the soil the necessary cultivation, would you advise rolling the land before drilling in the seed, or would it be all right to sow after harrowing? Would you advise sowing grass seed ahead of the hoes of a hoe drill or behind them and then follow with the harrow?

A. H.

Ans.—It depends a good deal on the soil. If it is in good tilth it is not necessary to roll; if it is lumpy, rolling would make a finer seed-bed, and if it were left a day or two before seeding it would tend to draw the moisture to the surface, which might quicken germination. We prefer sowing the grass seed ahead of the hoes, rather than behind, as the majority of the seeds will not be covered so deeply when a stroke of the harrows is given.

### Bridge Grafting.

Is there any way that young fruit trees can be repaired after they have become girdled by mice? I have a number of trees eight years old that have been girdled all around.

J. D.

Ans.—We know of different cases where bridge grafting has saved the trees. Scions are cut a little longer than the space to be bridged. They are then flattened at the ends and inserted into openings made by a sharp, narrow chisel. Care must be taken that the layer of bark on the scion connects with a similar layer on the trunk of the tree in order that the sap may be carried from the lower to the upper part. From six to eight scions, depending on the size of the tree, should be used. After the scions are inserted, grafting wax should be used to prevent the air from drying out the bark.

### Tanning Hides.

Is there any way a farmer can tan a horse's hide so it will be useful for mending harness, boots, etc.?

J. S.

Ans.—There are recipes for tanning but owing to lack of facilities at home it is advisable to have the work done at a tannery, which is fully equipped for doing good work. The following is a recipe: The hide must be soaked in soft water to make it perfectly soft, and then the flesh and fat scraped off, after which the skin may be put into a tan composed of equal parts alum and salt, dissolved in hot water. The skin should be left in the brine for a couple of days and then hung up and scraped to soften. It is then put in brine again and again scraped. After this a coat of oil is applied and the hide rolled up in damp sawdust. Scraping is the main operation in softening a skin. This process might be worked all right on a small skin, but we do not advise trying it on a large hide, as you would find it very difficult to scrape and soften it properly.

### Four-Horse Evener.

1. What are the rules for playing basketball?
2. Is the Standard-Bred horse classified as a saddle or trotting horse?
3. Describe a four-horse evener.

C. M. H.

Ans.—1. We cannot give the full rules of the game through our columns, and would advise you to secure a book of rules and regulations from some book store.

2. As a trotting horse.  
3. It is not stated whether the evener is wanted for a plow or cultivator. With the plow, it is rather difficult to get an evener which will permit of three horses walking on the land and one in the furrow. However, by using a pulley attachment on the doubletree and running a chain back to the plow, four horses can be used satisfactorily. The first pulley is seven inches from one end of the doubletree and the plow is hitched 15 1/4 inches from the pulley. The second pulley is 2 feet from the first one. A chain hooks into the clevis of the doubletree, goes through the two pulleys and back to the axle of the double plow. A number of our subscribers have used this type of evener and claim it works satisfactorily. A long doubletree with the ordinary set of doubletrees on each end is frequently used for implements other than the plow, and is sometimes used on the plow, but the one horse has to walk on the plowed land.



DUTCHLAND PONTIAC COLANTHA 31483

## CANADA'S GREATEST YEARLY RECORD BULL

and the almost perfect individual

Four of his seven nearest dams and his grandsire's full sister averaged 26,240 lbs. of milk and 1,140 lbs. of butter for the year.

We are consigning to the Perth Sale two fine daughters of King Segis Alcartra Calamity, bred to "Dutch"; four good Record of Merit cows, three of them heavy in calf to "King". We are also booking outside cows to either sire. Last week we bred two and booked three others, including the great Baroness Madoline. Both sires stay at Villa View where three 30-lb. cows were developed in one week. Write for full particulars.

**ARBOGAST BROS. & P. S. ARBOGAST, Sebringville, Ont.**

## PERTH BREEDERS' CONSIGNMENT SALE

# 50-HOLSTEINS-50

IN THE CITY OF STRATFORD, ON

Wednesday, March 13, 1918

At the Mansion House Stables

42 FEMALES AND 8 BULLS

Record of Merit and Record of Performance Cows. Many of them due to calve about the time of sale. Bred to some of the best bulls in Canada. Every animal will be sold subject to inspection.

Apply for catalogues to:

**ADAM C. PARK, Secretary**  
Listowel, Ont.

**W. M. ARBOGAST, President**  
Sebringville, Ont.

Auctioneer: Thomas H. Smith

## Fifty Holstein Females

Offered in Private Sale

Come and Make Your Selections From 130 Head

Within the next few weeks we are going to sell at least, fifty head of cattle, as present labor condition has forced us to reduce the herd. We will sell you one or more at prices you can well afford to pay. Come and make your own selections. We have 50 daughters of our senior sire, Sir Lyons Segis, who now has more than 30 tested daughters. We have 10 granddaughters of King Segis Pontiac Alcartra, (the \$50,000 sire), and 12 daughters of Sir Riverdale Echo Lyons, a brother to May Echo Sylvia.

If You Want Females, Don't Delay. We Also Have Bulls.

**Allison Stock Farm** Toronto and Montreal  
C. P. R. MAIN LINE. **Chesterville, Ont.**

29.68 lbs. butter, 563.7 lbs. milk . . . . .

as a junior three-year-old  
This is the official record of

## Burkeyje Hengerveld May Echo (12658)

Her dam "Burkeyje Hengerveld", is Canada's first 20,000 lb. 4-year-old. Her sire is a son of "May Echo" and a 3/4 brother of the great "May Echo Sylvia" (world's champion).

You can buy her son, sired by "Hillcrest Ormsby Count", a son of "RAUWERD COUNT DEKOL LADY PAULINE," 29,000 lbs. milk, 1,113 lbs. in 1 year, 112 lbs. milk in 1 day. Dam of K. P. Rauwerd, 3,413 lbs. butter as senior 3-year-old, 103 lbs. milk in 1 day.

Where Can You Equal This for Production and Re-Production?  
He is largely white in color—a beauty. Write us for Price, etc.

**JOS. O'REILLY, R. R. No. 9, PETERBORO, ONTARIO**

## Grandsons of Rag Apple Korndyke 8th

We have four young bulls of serviceable age, by our herd sire, Sir Waldorf Korndyke, who is a son of the mighty Rag Apple Korndyke 8th. Their dams' records run as high as 31.31 lbs. butter and 704 lbs. milk for 7 days, and every calf is a show individual. We also have one 8-months bull by a grandson of May Echo Sylvia and from a daughter of a 31-lb. cow. Extended pedigrees mailed on request. Are you interested? Write J. W. STEWART - North Star Stock Farm - LYN, ONTARIO

Questions and Answers. Miscellaneous.

Material for Wall.

How much sand, gravel and cement will be required to make a wall 3 feet high, 10 inches thick, under a building 29 by 80 feet? Also, what material would be required to put in a 4-inch concrete floor?

Ans.—It will require about 20 cubic yards of sand and gravel and 17 barrels of cement for the wall; that is if the material is mixed in the proportion of 1 to 8. For the floor, 28 cubic yards of gravel and about 24 barrels of cement will be needed.

Percentage Fat in Cream.

What percentage test should one get with cream churning 18 pounds of butter from 40 pounds of cream?

2. What quantity of material will it take to build a cement wall 70 feet long, 12 feet high; windows and doors taken out?

Ans.—1. Figuring on the basis of one-sixth over-run, the cream would test about 38.5.

2. Building a wall one foot thick, it will require practically 30 cubic yards of gravel and 26 barrels of cement.

Feeding Pigs and Calves.

1. In what proportion should potatoes, turnips and grain be mixed to get best results for pigs about three or four months old? I feed a little skim-milk. Should a pig get all he can eat of boiled potatoes, turnips, middlings, oats and barley?

2. What would be a good ration for a bull calf four months old? I have hay, straw, turnips, oats, bran and oil cake on hand.

3. What is the best way to apply pitch to cement to prevent water soaking through?

Ans.—1. It depends considerably on the supply on hand. Pigs may be fed a liberal portion of boiled potatoes and turnips, the amount being regulated by the condition the pigs are in. A pig might get practically all he will eat of this, with enough grain added to keep him thrifty. Two parts of potatoes to one part turnips would be a fair proportion of roots.

2. A calf four months old should grow and be thrifty on a ration of good clover hay, a few turnips, and from three-quarters to one pound of oats and bran, with a little oil cake added. If skim-milk is plentiful it might profitably be fed, but if there is a limited quantity a calf of that age will get along without it, or with but a small quantity at least.

3. It would be found rather difficult to mix the pitch with the cement, but if it is painted on the wall it would have a tendency to prevent the water coming through.

Unthrifty Pigs.

1. I have four pigs about four months old. They are not thriving. They go around the pen with their heads down. I am feeding chopped oats with a little bran.

2. One of my cows gives thick milk from one quarter. What is the cause?

Ans.—1. From the symptoms given it is rather difficult to diagnose the case. It is possible that they are troubled with worms; if so, you will, no doubt, notice them in the excrement. Fast for 12 hours and then give a mixture of one part oil of turpentine and seven parts new milk. Two to six tablespoonfuls of this mixture could be given to each pig, depending on the size. The pigs might be fed a few roots if you have any, and also should be given plenty of exercise.

2. We are inclined to believe that the cow has a slight touch of garget, which may have been caused by an injury or chill. When the trouble is first noticed the cow should be given a purgative of one pound Epsom salts and a teaspoonful of saltpetre dissolved in a quart of warm water. If the udder is at all swollen or feverish, bathe it with hot water and rub well with a mixture of spirits of turpentine and goose oil or lard. Once the fever leaves the quarter it is possible that the milk will be normal. The quarter should be milked out dry at each milking. Garget may disappear very quickly, but sometimes the quarter is lost by this trouble. If a cow is near the end of her lactation period, the milk may be all right when she freshens again.

Important Sale of HOLSTEINS WILL BE HELD AT OWEN SOUND WEDNESDAY, MARCH 20, 1918

consisting of 19 Pure-bred Holstein Cows, bred and in calf to Ormsby Korndyke Pontiac; also calves from "Correct Change," one of the best bulls in Canada; also a number of bulls from the great Toronto Syndicate bull, Sir Lyons Hengerveld Segis. One cow gave, as a two-year-old R.O.P., 12,889.15 lbs. milk, testing 4% butter-fat. There will also be sold 30 high-class grade cows, all heavy producers. There are no boarder cows in this herd—records have been kept—and where a cow showed no profit she was immediately weeded out. In the sale also will be offered one Empire Milking Machine, as good as new, also one Clydesdale Filly, three years old.

Terms:—10 months credit on joint notes at 6% interest. C. P. R. train due 1.05, G. T. R. train due 12.45. These trains will be met on day of sale. Farm 1 mile from Owen Sound Market on Carafaxa Road. For further information regarding this sale write

THOS. McNEA, Proprietor, R. R. No. 6, Owen Sound, Ont.

INDIVIDUALITY—PRODUCTION—PEDIGREE. These three qualities are blended into as near perfection as we think is possible in the sire, May Sylvia Pontiac Cornucopia. As an individual he is almost perfect; as regards production he comes directly from the greatest milk and butter producing families in Canada and United States. His two grandams are: K. P. Pontiac Lass, with 44.18 lbs. butter in 7 days—the Holstein sensation when made—and May Echo Sylvia, with 41 lbs. butter in 7 days and 152.1 lbs. milk in one day, 1,005 in 7 days—the world's wonder. This sire is under lease for 2 months and stands for service to a limited number of cows at M. H. Haley's. For particulars write: M. H. HALEY, SPRINGFORD, ONT.

CLOVER BAR HOLSTEINS

We are now offering a number of young bulls, sired by our senior herd header, Francy 3rd's Hartog 2nd, the noted son of the famous old Francy 3rd and Canary Mercedes Hartog; also a few females—all choice individuals. P. SMITH, PROPRIETOR, STRATFORD, ONTARIO

GLENHURST AYRSHIRES—ESTABLISHED 50 YEARS. For a half-century Glenhurst Ayrshires have been noted for their depth and size, good teats and smoothness of conformation. Our famous Flos family has produced dozens of 60 and 65-lb.-a-day cows many on twice-a-day milkings. We have young bulls up to twelve months, and females all ages. If you are looking for a combination of size, type and production—plus high butter-fat—write me or visit the farm. JAS. BENNING, Summerstown, G.T.R., Williamstown, G.T.R., Williamstown, Ont

SPRING BANK R. O. P. AYRSHIRES Herd Sires: Netheron King Theodore Imp., and Humeshaugh Invincible. Grand Champion London, 1917. Our herd at present holds the Canadian records for both milk and butter in the two-year three-year and the mature classes. Let us tell you about the daughters of Netheron King Theodore We have sons of both bulls for sale—all have R. O. P. dams. Visitors met at Hamilton by appointment A. S. TURNER & SON (3 miles from Hamilton) RYCKMAN'S CORNERS, ONT

RAVENSDALE AYRSHIRES A few splendid 12-months-old bulls, out of R.O.P. and imp. high-testing dams. January test averaged 4.6%; also younger bulls and heifers. I have three registered Clydesdales for sale, eight months old. Write for prices or come and see stock. W. F. KAY, PHILIPSBURG, QUEBEC. 50 miles south of Montreal. St. Armand Station, G.T.R.

RECORD OF PERFORMANCE JERSEYS Choice Bulls and Females. We have six young bulls of serviceable age, all from R.O.P. dams Three are by our senior sire, Brampton Dairy Farmer, and three are by our Junior sire, Brampton Bright Togo. Write for records. We also have females. R. & A. H. BAIRD (G.T.R. Stations—New Hamburg, Bright.) NEW HAMBURG, ONT

BRAMPTON JERSEYS Special offering of fresh cows, in-calf heifers and Island bred bulls. Nearly all of the Champtoo R.O.P. cows are directly descended from the Brampton Herd. Buy at the fountain head. B. H. BULL & SON, BRAMPTON, ONTARIO

THE WOODVIEW FARM JERSEYS Canada's Most Beautiful Jersey Herd IMPORTED CHAMPION BOWER at its head. This bull, with his get, won first prize on the Island of Jersey, 1914, second in 1916, and again first in 1917. Present offering: A few yearling heifers in calf to our great young bull, Woodview Bright Prince (7788), and bred from imported sire and dams. We show our work cows and work our show cows. LONDON, ONT. Jno. Pringle, Prop.

THE EDGELEY CHAMPION HERD OF JERSEYS Write us about your next herd sire. We now have sons of our present herd sire, Edgeley's Bright Prince, who is a son of Canada's champion butter cow, Sunbeam of Edgeley. Pay us a visit. Sunbeam of Edgeley is not the only high-record cow we have. We are pleased to show our herd at all times. JAMES BAGG & SONS (Woodbridge, C.P.R., Concord, G.T.R.) EDGELEY, ONT.

GREAT DISPERSAL SALE OF TWENTY-SEVEN HEAD GLENBOYLE JERSEYS at Dr. Rudd's Sale Stables, Woodstock Monday, March 11, 1918 Sale Will Commence at 2 o'clock In the offering are that great Jersey sire, Imperial Majesty, and that champion cow, Beauty Maid, with 4-year-old record 14,852 lbs. milk, 872 lbs. fat; their two sons; Beauty Maid's dam; Flora of Glenboyle 3-year-old record 11,954 lbs. milk, 634 lbs. fat, with three daughters by Imperial Majesty; Springbank Butter Girl 3-year-old record 12,544 lbs. milk, 608 lbs. fat, with her daughter by Imperial Beau, son of Beauty Maid; Sadie Miss Polo 2-year-old record 9,874 lbs. milk, 544 lbs. fat, and calf by Imperial Beau—Maid of Dentonia, 476 lbs. fat, over 10,000 lbs. milk; Fontaine's Belle of Dentonia R.O.P. 9,842 lbs. milk, 531 lbs. fat, the highest Jersey record for cow starting test at age of ten years or over. The above is an indication of the quality of the entire herd which is in the sale. Cows and heifers are bred to Imperial Majesty or to Imperial Beau. Terms: Cash. For Fuller Particulars Write the Proprietor. D. A. BOYLE, WOODSTOCK, ONTARIO Sales Manager, Tom Dempsey, Westerville, Ohio. Auctioneers { Col. D. L. Perry, Columbus, Ohio. William Pullin, Woodstock, Ontario.

17 95 ON TRIAL American FULLY GUARANTEED CREAM SEPARATOR A SOLID PROPOSITION to send you, well made, easy running, perfect skimming separator for only \$17.95. Closely skims warm or cold milk. Makes heavy or light cream. Bowl a sanitary marvel, easily cleaned. Different from picture, which illustrates larger capacity machines. See our easy Monthly Payment Plan Shipments made promptly from Winnipeg, Man., Toronto, Ont. and St. John, N. B. Whether dairy is large or small, write for handsome free catalog and easy payment plan. AMERICAN SEPARATOR CO. Box 3200, Beahridge, N. Y.

Fernbrook Ayrshires Young bulls for sale (out of R. O. P. dams) from one to fifteen months old; tracing closely to the world's champions, Garclough May Mischief and Jean Armour. COLLIER BROS., Beachville, Ontario (OXFORD COUNTY)

4.07% Butter Fat was the average from 971 Ayrshire Cows for 1 Year. WRITE W.F. STEPHEN, Secretary CANADIAN AYRSHIRE BREEDERS' ASS'N Box 513 Huntingdon, Que.

CITY VIEW AYRSHIRES Increase your test—5 young bulls from R. O. P. dams testing from 4.15 to 5.02% fat. Sired by bulls from record cows. JAMES BEGG & SON, ST. THOMAS, ONT.

Choice Offering in Ayrshires At Special Prices. Several young bulls of serviceable ages. All from R. O. P. sires and dams. Come and see them. Ino. A. Morrison, Mount Elgin, Ontario.

Glencairn Ayrshires Herd established 40 years. Producing ability from 8,600 to 11,022 lbs. If that sort of production appeals to you, we have heifers all ages and young bulls for sale. Thos. J. McCormick, Rockton, Ont. Copetown, Stn. G. T. R.

Kelso Farm R. O. P. Ayrshires. Herd headed by Palmston Speculation Imp. We never had a stronger line-up of R. O. P. producers than we have at present. Our 1917-1918 young bulls are sure to please. D. A. MacFarlane, Cars Cross- ing, G. T. R., Atheistan N. Y. C.; Kelso, Que.

Twenty-Five Years Breeding Registered Jerseys and Berkshires We have bred over one half the world's Jersey champions for large yearly production at the pail. We bred and have in service the two grand champion Berkshire boars. If you need a sire for improvement, write us for literature, description and prices. GOOD FARM, LOWELL, MASS.



## Cheaper Wheat

Broadcast 100 lbs. of Nitrate of Soda per acre as a Top Dressing for Wheat and Seeded Crops. 200 lbs. per acre for Cultivated Crops.

Why not make your labor profitable and help feed our Armies in field?

**WILLIAM S. MYERS, Director**  
25 Madison Avenue, New York



**LABELS**  
Live-stock Labels for cattle, sheep and hogs, manufactured by the Kelchum Manufacturing Co., Box 501, Ottawa, Ontario. Write for samples and prices

## SHROPSHIRE

30 Yearling Rams—12 Yearling Ewes.  
W. H. PUGH, MYRTLE STATION, R. R. 1  
Farm 2 miles from Claremont

## Sunnyhill Yorkshires

Large English, improved Yorkshires, from prize winning stock bred for type, quality and production. Sows of breeding age and younger, hogs two to four months. Write to

**WM. MANNING & SONS**  
WOODVILLE, ONTARIO

## Inverugie Tamworths

From prize-winning stock of the choicest breeding. A few sows bred. Boars ready for service. Also a choice lot of young stuff. Pedigrees furnished on application. All orders promptly attended to.

**LESLIE HADDEN, R.R. No. 2, Pefferlaw, Ont.**

## Lakeview Yorkshires

If you want a brood sow or a stock boar of the greatest strain of the breed, (Cinderella), bred from prizewinners for generations back, write me.

**JOHN DUCK, PORT CREDIT, ONTARIO.**

## Prospect Hill Berkshires

Young stock, either sex, for sale, from our imported sows and boars; also some from our show herd, headed by our stock boar, Ringleader. Terms and prices right.

**John Weir & Son, Paris, Ont., R. R. 1.**

## DUROC JERSEYS

Our herd won all champion prizes at Toronto and London, 1916 and 1917. Pairs not akin. Young stock all ages for sale. Visitors welcome. For further particulars write:

**Culbert Malott, No. 3, Wheatley, Ont.**

## Featherston's Yorkshires—The Pine Grove Herd

I have the choicest lot of young sows of breeding age that were ever on the farm. A few are already bred. Also have 10 young litters. Prices reasonable.

**J. K. FEATHERSTON, STREETSVILLE, ONT.**

## SPRINGBANK CHESTER WHITES

Pigs, both sexes, five months old and younger; a number of them sired by Curly King—9997—who has been a winner at Toronto and London the last several years. Satisfaction guaranteed.

**Inspection invited. Wm. Stevenson & Son, Science Hill, Ont.**

## Cloverdale Shropshires and Berkshires—40

shearing rams, 70 shearing ewes, an exceptionally choice lot; true to type and well grown, nearly all sired by the show ram, Nock 16 Imp. In Berkshires, the usual strong offering, including sows just bred.

**C. J. Lang, Burketon, Ont.**

## Morrison Tamworths and Shorthorns—

Bred from the prizewinning herds of England. Tamworths, both sexes; boars from 2 to 12 months. Shorthorn bulls from 5 to 10 months old, reds and roans—dandies.

**CHAS. CURRIE, Morrison, Ont.**

## CHOICE YORKSHIRES

All ages and both sexes, at right prices. A few bred sows and several young litters at an extra special. All varieties. Turkeys, Geese and Ducks, S.C. White Leghorns.

**T. A. KING, Milton, Ont.**

## TAMWORTHS

Young sows bred for spring farrow and a nice lot of young boars for sale. Write:

**John W. Todd, R. R. No. 1, Corinth, Ont.**

## SEVERAL YOUNG, REGISTERED Berkshire Sows and Boars

FOR SALE. Apply to Chas. Noel, Manager, "Beechhead Farm, Meadowdale, Ontario"

## Meadow Brook Yorkshires

Have a splendid offering of young stock to offer at reasonable prices. Write your wants to:

**G. W. MINERS, R. R. No. 3, EXETER, ONT.**

## Questions and Answers. Miscellaneous.

### Agreement.

A owns a farm and B approaches him on the road and wants to rent it and offers \$260 per year, and other conditions were talked over. B agrees to accept this offer and will meet A in the near future and have lease drawn out with conditions specified on it. Now A does not want to let farm go, he changes his mind and refuses to let B have lease. Can B compel A to give lease on a verbal agreement?

W. H. T.

Ans.—Writings or money paid down are required to make an agreement binding. Of course, it reflects somewhat on a man's word if he does not live up to his verbal agreement.

### Preparing Soil for Strawberries.

1. Where could I get a book on growing onions? I have a piece of land which has had four crops taken off since it was first broken up. Last spring I sowed oats but they were a long time in coming up and did not give a good yield. They were very thin on the ground. In several places I noticed patches covered with a kind of moss. Do you suppose that lime would help it any?

2. I purpose planting about an acre of strawberries this spring and would like to manure the land before planting, but cannot secure any quantity until after seeding. Consequently, my intentions are to put the manure in a large box with a tight bottom and soak it well and then use the liquid manure on the strawberries during the summer. Would this be advisable?

M. F.

Ans.—1. The book entitled "New Onion Culture," by Greiner, may be secured through this office for 55 cents, postpaid. It is possible that wire worms thinned out the oats in the spring, and it is also possible that the land is sour and would be benefited by an application of ground limestone. If you tested the soil with a little acid and it did not effervesce, it would be an indication that there was a lack of lime. Around two tons of ground limestone to the acre is frequently applied with satisfactory results.

2. The method mentioned would entail a good deal of labor, but the liquid manure would certainly help the vines. If your land is not in good condition, we would favor giving it a partial summer-fallow for the summer, during which time farm-yard manure could be worked into the soil. The strawberry plants could then be set out early in September. However, we favor spring planting where possible.

### Hogs—Permanent Pasture.

1. Is there any profit in raising hogs at the present prices of grain and mill-feeds?

2. Which is the best breed of pigs?

3. What is a good mixture to sow on a hilly field that is to be left in pasture for some time? Part of the field is clay and the remainder is light loam. It is all high, dry land, and I would like to cut it for hay the first year.

4. I have a piece of high, light loam that grew roots last year. Would you advise sowing alfalfa in preference to other hay crops?

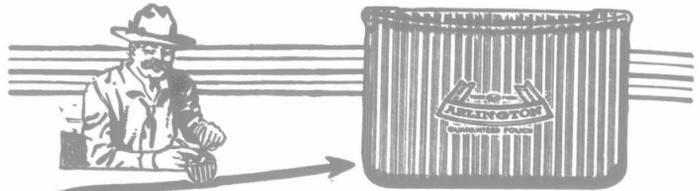
C. M. H.

Ans.—1. It depends a good deal on how the pigs are fed and cared for. We have seen statements which showed a fair profit at the present prices, where the pigs were kept thrifty from the time they were weaned.

2. Experiments have shown that economical gains are made with all breeds of pigs. We doubt if there is any "best" breed. Some stockmen like one, and some another. Of course, there are the two classes—bacon and fat. If the bacon trade is catered to then it would be advisable to keep a breed of bacon type.

3. For high land 4 pounds of orchard grass, 4 pounds of meadow fescue, 2 pounds of white clover, 2 pounds of alsike, 4 pounds Kentucky blue grass, 2 pounds timothy, 3 or 4 pounds of alfalfa, and 3 pounds of red clover, make a very satisfactory mixture. The clover and timothy will furnish a crop the first year or two to cut, and the other grasses will come on for pastures.

4. If alfalfa will grow it is a good crop to sow. On some soils, however, it is not quite so sure as the other clovers. It is found growing satisfactorily on both light and heavy soils, but the water level does not come near the surface.



## For Pouch Satisfaction

Have you ever considered that a real cool smoke depends on the condition of your tobacco? Tobacco kept in an

## ARLINGTON Tobacco Pouch

is always cool and moist, for the thick red rubber of which the Arlington is made ensures your tobacco in proper condition. Unlike the pouch of inferior quality, the Arlington is moisture proof—the rubber will not become hard and a guarantee for two years of reasonable service goes with each pouch.

The Arlington may be had in oval or square shapes—in a variety of sizes. Priced from 50c up, according to size.

Insist upon your dealer showing you an Arlington. You will know it by the trade mark stamped on the face.

## The Feed for Hungry Calves

Conserve the milk and help the nation. You do not need to feed milk to your calves if you use Royal Purple Calf Meal. It is a perfect substitute for milk. It is partially cooked, and the pure ingredients are so combined that the meal will not injure or derange the digestive organs of even the youngest calf. If you want rapid development and healthy calves, feed



## Royal Purple Calf Meal

Let the following unsolicited testimonial letters convince you of the sterling qualities of our calf meal.

John D. Hamilton, Port Hope, Ont., writes: "I have used Royal Purple Calf Meal and I am recommending to my friends. I might add that I find no trouble with the calves scouring while using this meal. I have tried many other Calf meals, but never found one that proved satisfactory until I got Royal Purple."

S. M. Osborne, Maxwell, Ont., writes: "We have a pretty good calf which is now four months old and weighs 400 lbs. I think your calf meal is fine. I have never fed anything that will make a calf grow as fast as this meal."

Order Royal Purple from your feedman. It is sold in 25, 50 and 100-lb. bags.

**W. A. Jenkins Mfg. Co., Limited**  
London, Canada

45

## ENGLISH LARGE BLACK PIGS

We have for sale at present some young pigs of a breed new to Canada, but standardized and very popular in England, from our pure-bred, imported LARGE BLACKS. Stock excellent for crossing with other breeds. Their English reputation is that they grow large and fast. Also for sale, pure bred English Berkshires.

**Lynnore Stock Farm, F. Wallace Cockshutt, Brantford, Ont.**

## OAK LODGE YORKSHIRE HOGS

We have a large selection of extra-good boars and sows of different ages. We are selling at prices that make it attractive for the purchaser. Write for what you want.

**J. E. BRETHOUR & NEPHEWS, Burford, Ontario**

## ELMHURST LARGE ENGLISH BERKSHIRES

From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.

**H. M. VANDERLIP, Breeder and Importer, R. R. 1, BRANTFORD, ONTARIO**  
Langford Station on Brantford and Hamilton Radial

## CLEAR VIEW YORKSHIRES

We have at present 12 boars and 10-month sows, bred to farrow in April, as well as others younger. Also young boars and sows ready for sale. Write for particulars.

**ANTHONY GIES, ST. JACOB'S, ONT.**

## BERKSHIRES

My pigs, over many years have won the leading prizes at Toronto, London and Glasgow. I have bred and raised the best strain of the breed, both sexes, any age.

**ADAM THOMPSON, R. R. No. 1, STRATFORD, ONT.** Shakespeare Station, G.T.R.

# Spring Wheat Seed for Ontario

**T**HE world demand for wheat in 1918 justifies the greatest possible effort towards increased production. The small acreages of Fall Wheat put in last fall will mean increased acreage in Ontario available for Spring Wheat. The Ontario Government is co-operating with the farmers in order to provide seed. It has purchased 50,000 bushels of No. 1 Marquis Spring Wheat Seed through the Seed Branch of the Federal Department of Agriculture. More will be purchased if necessary to fill needs.

**Distribution**—Seed is sold only in 2-bushel bags. Carloads will be placed at certain points in the Province where less than carload orders can be filled, the purchaser paying local freight from such distributing point to his own station. Where Farmers' Clubs or other organizations buy in carloads lots, the price at their local stations will be the same as at distributing points.

**Where to buy**—Purchases may be made either in the warehouse at the distributing points, or orders may be placed with the nearest District Representative of the Provincial Department of Agriculture, or they may be sent direct by mail to the Markets Branch, Department of Agriculture, Parliament Buildings, Toronto.

**Payment in Cash**—Price is \$2.74 per bushel at Distributing Points. **In all cases, without exception, Cash must accompany order.** Send remittance by

check, postal note, post office or express money order made payable to Ontario Department of Agriculture, Markets Branch.

**Order Early**—In the event of the requirements of the Province being underestimated, there may not be enough seed to go around. It is advisable in order to insure having their orders filled that purchasers should place orders as soon as possible. All orders are subject to confirmation and will be filled in the order received. As seed is delivered in 2-bushel bags, order should be for even numbers of bushels, and no order for less than 2 bushels can be accepted.

**Names of Distributors** at local points will be announced later. Distributing points at present decided are: Hamilton, Woodstock, St. Mary's, London, Chatham, Toronto, Brampton, Newmarket, Barrie, Orillia, Brantford, Simcoe, Welland, Orangeville, Alliston, Listowel, Durham, Palgrave, Stouffville, Lindsay, Oshawa, Peterboro, Port Perry, Port Hope, Kemptville.

## Ontario Department of Agriculture

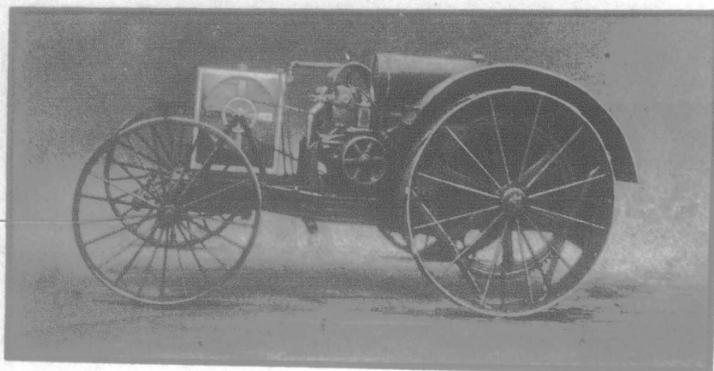
Markets Branch  
Parliament Buildings, Toronto

Sir Wm. H. Hearst,  
Minister of Agriculture.

Dr. G. C. Creelman,  
Commissioner of Agriculture.



ONTARIO



**E. LEONARD & SONS, LIMITED**  
London, Canada

Agents for the

**HUBER  
Light-Four Tractor**

It took nearly twenty years' experience in the manufacture of Gas Tractors to reach the conclusion that the the *three bottom* type is the Ideal Unit.

80% of the tractors sold in the United States are three plow tractors.

Less Gears, Less Bearings than any other make of Tractor. Roller Bearings are of the Hyatt make.

Buy a tractor like the Huber Light Four Thoroughly tried and tested. Many exclusive features in design and construction. No freaks or fads.

Easily pulls three 14 inch bottoms, set 8 inches deep. Plows an acre an hour. Runs all farm machinery. 17 h.p. at the draw bar, 24 h.p. at the belt.

Burns gasoline, kerosene or distillate.

**Our Folder "Doing the Impossible"**

is a record achievement. It proves the excellence of the Huber.  
Write for it and our proposition.

**Clearing Sale**

OF

**33 Pure-bred Shorthorns**

THE PROPERTY OF WEIL & LYFIELD

At O'Rourke's Sale Stables, Caledonia, Ontario

Friday, March 15th, 1918

In the offering are 16 cows, a number of two-year-old heifers, yearling heifers and calves; also three bull calves, ready for service, and a two-year-old bull, Emperor Chief 103144.

Among the 33 head to be disposed of are a number of Nonpareils, whose dams were sired by Rosicrucian of Dalmeny 45229 and Roan Chief 60865.

Catalogues on application to:

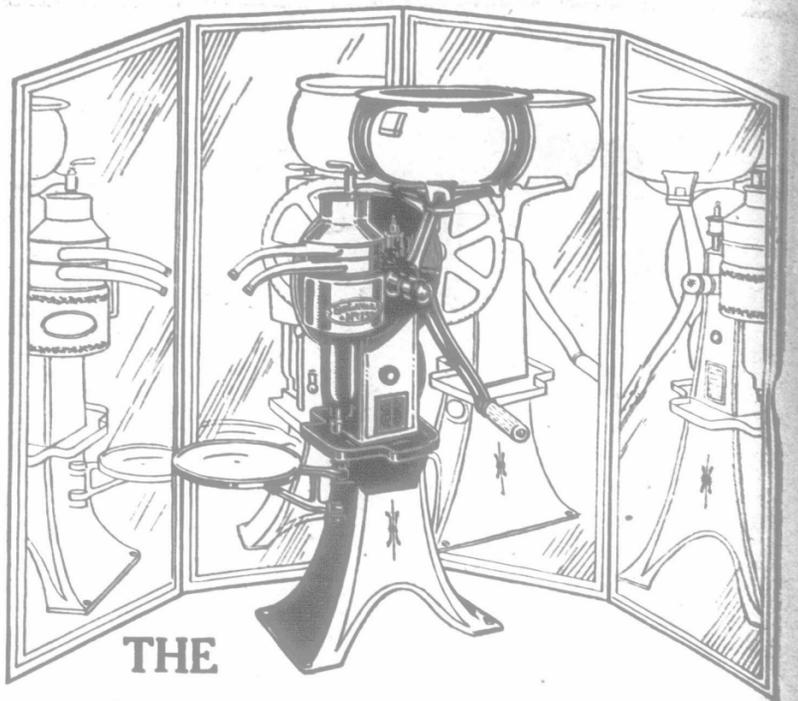
**Gus Weil, Jarvis, Ontario**

J. Deming, Jarvis, Auctioneer

**175 - ACRE FARM \$10,500**

\$1,500 down, balance on mortgage. With 30 acres of bush—maple, beech and some elm. Fine old homestead, never rented. Big stock always kept on farm. In Erin Township, Wellington County. 130 acres workable, balance bush and pasture. Good roads. Soil clay to gravelly loam. Fine large stone house; pleasant view; 10 rooms; good cellar under whole house. Good bank barn, well built, 72x50; good stabling for 10 horses, 30 head of cattle. Good root house under barn. Driving house 66x26; hog pen underneath. Sheep pen 30x26. 65 acres fall plowed; 30 acres fresh seeding. Guelph 13 miles. School 2 lots. Ballinacree village 3 miles. Has two churches, large store, blacksmith shop, etc. Erin village 5½ miles. Possession March 10th, 1918. Write for new free catalogue and bulletin of 750 farms for sale.

The Willoughby Farm Agency, Dept. 400, Georgetown, Ont.



**THE  
NEW DE LAVAL  
CREAM SEPARATOR**

**Every Reflection  
Shows Perfection**

VIEWED from every angle, the De Laval is distinctly in a class by itself. It has a business-like appearance. It looks as if it were well made, and it is. It looks sturdy, and it is. There is no make-believe about it anywhere, from the wide-spreading substantial base to the solid, seamless, symmetrical supply can.

It's no wonder that big dairymen and creamerymen who have for years made a careful study of dairy methods and machinery refuse to consider any other separator but the De Laval. They know that from every angle—clean skimming, ease of operation, freedom from repairs, durability—there is no other cream separator that can compare with the De Laval.

They know that it has a record of 40 years of service behind it. They know that it can be depended upon. They know that they can't afford to take chances with any other cream separator—

And neither can you.

Order your De Laval now and let it begin saving cream for you right away. Remember that a De Laval may be bought for cash or on such liberal terms as to save its own cost. See the local De Laval agent, or if you don't know him, write to the nearest De Laval office as below.

**THE DE LAVAL COMPANY, Ltd.**

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos. Alpha Gas Engines, Alpha Churns and Butter-Workers. Catalogues of any of our lines mailed upon request.

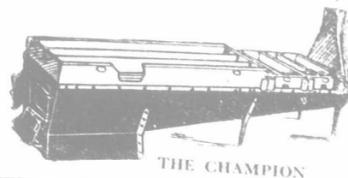
MONTREAL PETERBORO WINNIPEG VANCOUVER  
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

**Advice From the Food Controller**

Re Maple Sugar: Office of the Food Controller, Ottawa, February 8, 1918  
Dear Sir,—I would respectfully suggest that in your advertising maple sugar and syrup producers you emphasize the opportunity for Canadian maple products, and call attention to the cane and beet sugar shortage. You have authority for using any influence with the approval of this office for the campaign for increased maple syrup production, so our advice to each maple grove owner is—

**Tap More Trees — Tap Every Tree You Can**

Maple sugar is more than ever a food, a national necessity. Make preparations now to save this valuable crop, and double or treble the production. Every pound of sugar, every gallon of syrup helps food conservation.



THE CHAMPION

With a GRIMM CHAMPION OUT-FIT you can make more syrup with less help, and in less time, and at less cost than any other way.  
Put your maple bush in working order, and get in touch with us on the question of outfit.

The Grimm Manufacturing Co., Ltd.  
60 Wellington St., Montreal



**Herefords**

We offer seven bulls bred from our famous herd bull, Repent. Dams from imported stock. Write for full particulars. Exclusive Hereford breeders since 1899.  
A. S. Hunter & Son, Durham, Ontario.



# 12 Steers buy this 100-ton Barn

Was there ever a time when so little farm produce would buy so much?

Wheat at \$2.25 buys almost double what it bought 4 years ago in spite of the general rise in prices.

Potatoes at over \$2.00 also buy double the farm machines, double the buildings, double the equipment of every kind.

Can any farmer remember a time when 12 steers would buy a barn such as shown here?

Beef at \$11.75 makes a farmer think about stable and barn capacity.

At \$1,766 this 100-ton barn is good value. In terms of farm produce its cost is very, very low.

In capacity it holds 100 loads of grain or hay. It is built under our patent construction, known the country over as the Steel Truss Barn. It is roomy, convenient, light and well ventilated. It is fire-proof and lightning-proof. Our process of building is so simple that the old-time barn-building gang is not needed. The Steel Truss Barn idea saves money in the erection and saves labor in loading and unloading grain.

The complete description of the Steel Truss Barn is worth any farmer's time to read. It is told in our special Book on Barns which we send free to farmers on request.

## Are You Waiting for Prices to Drop?

Any farmer can make money in 1918.

A good farmer can make more money than he ever made before. He can make big money.

Prices are good. They will be better. They can't help but be better. Because food is scarce and growing scarcer. The growers of food will become rich.

To make an increase in crops in 1918 should be the aim of every practical farmer. This is one year when an increase in crops cannot possibly lower prices. For this year the world is hungry and the whole world is Canada's market.

The farmer who holds back in 1918 is standing in the way of the best chance he ever had.

If a machine is needed to increase the crop—no matter how high the price of that machine—it is as nothing compared to the money that can be earned with it.

If extra housing for crops, stock or machines is needed every effort should be made to get the buildings erected. For they will begin to make money at an unheard-of rate this year.

It is true that farm equipment of all kinds costs more money to-day than before the war.

But, is that a sound reason for waiting to buy?

The opportunity to make money out of such equipment will not wait. This is the golden opportunity for the live farmers. This is the year of all years to DO THINGS.

And to the best of our belief the prices of all metal materials will not be lower for years to come.

To-day when farm produce will buy almost double in the way of equipment what it would have bought three years ago is the proper time to invest.

The farmer who holds back; who contents himself with smaller crops; who lets crops spoil because his barn is not large enough or in bad repair; who has not enough stable room to winter profitable stock; and all because he wants to wait for prices to come down before he invests in machines and buildings, will find that the few dollars he may possibly save, will cost him thousands in profits.

Two years, some farmers have waited. They have worked without tools. They have produced far less than they should. They have not made the money they should. To-day, they must see that waiting was a mistake.

Already the move to improve the farms and get the utmost in profit has started. Our barn department is working on plans for over a hundred new barns, and more are being asked for every day.

We urge the farmers in all earnestness to think about getting their building plans under way without delay. Our capacity for building stables and barns is, as all know, very great. We are anxious to serve Canadian farmers well and promptly. But building materials are not unlimited. We warn all those who wish to build this year to get started early; to have our plans before them, and get their orders in as soon as possible.

Our books on barns, the expert services of our barn experts, the stable plans, and full specifications and blue prints are furnished without charge. Write to-day if you are interested.

## The Metal Shingle & Siding Company, Limited

Preston, Ont., and Toronto

Write Nearest Branch

Factories: Montreal, Toronto, Winnipeg, Saskatoon, Calgary.



Please send, free of all obligation, your latest catalogue of farm buildings and supplies.

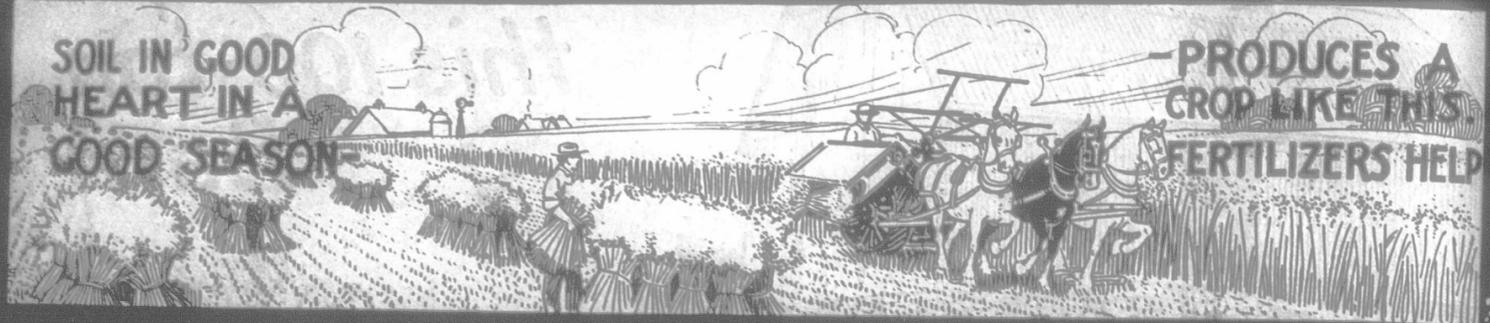
Name .....

Address .....

.....

F. A.

# Heavier yields per acre with larger profits.



## It Pays to Feed the Soil

The soil is a vast reservoir of plant-food, but most of it is not immediately available for plants. Only to the extent that this supply is rendered available can profitable crops be grown. Good cultivation, and the action of plant and soil acids, increases the yield by increasing the amount of plant-food which the crops can obtain. Manures and fertilizers add to this amount.

Good cultivation and the use of fertilizers are particularly important this year. It is the will of the farmers of Ontario that every acre of land shall produce the maximum yield this coming season that circumstances permit.

### LIME AND HUMUS—THE WINNING COMBINATION

If your land has been well cultivated and is well drained but the yields have not been satisfactory, it will pay you to study the lime and humus question carefully.

#### WHY LIME IS ESSENTIAL

- (1) It is a soil corrective; many soils have become acid because the lime has been leached away. Crops will not thrive in an acid soil.
- (2) It stimulates plant growth by acting on the compounds in the soil containing plant-food, making these more available for plant use.
- (3) It acts upon the texture of heavy soils, making them less sticky and producing a better condition of tilth.
- (4) It produces a condition of soil under which beneficial bacteria thrive best.
- (5) It hastens decay of organic matter, thus liberating humus and nitrogen.

Sufficient lime for ordinary soils may be supplied by applying from 1 to 2 tons of ground limestone rock per acre or  $\frac{1}{2}$  to 1 ton of burned lime per acre. Do not use freshly burned lime on light soils or on a growing crop.

#### HUMUS IS ABSOLUTELY NECESSARY

- (1) Humus is only another name for decayed vegetable matter in the soil.
- (2) It is practically the sole source of nitrogen for the plant, other than that gathered by nitrogen-fixing bacteria, or whatever is added in a mineral fertilizer.
- (3) It furnishes acids which aid in bringing into solution the potash and phosphoric acid in the soil.
- (4) It greatly increases the water holding capacity of the soil.

(5) It very much improves the physical condition of the soil.

#### HUMUS IS BEST SUPPLIED

By (a) farm-yard manure, (b) ploughing down clover sod, (c) ploughing down green crops.

Farm-yard Manure supplies the most-needed fertilizing elements—nitrogen, phosphorus and potash—as well as humus. These are supplied in varying amounts, however, and are not always in the proportions required to ensure the biggest yields of different crops. That is why it is often best to use both farm-yard manure and commercial fertilizer.

Ploughing Down Clover Sod is a decidedly cheap way to supply humus. It usually pays best to take off but one crop and plough the sod. Then, too, bacteria which go with clover, gather nitrogen from the air and store it within the plant—in the roots as well as in the stem and leaves. Thus, this most costly of plant-foods (nitrogen) is thrown into the bargain as it were. It is one of the few chances to get something for nothing.

Green crops of any kind, ploughed under, assist in producing humus and in increasing necessary bacterial action.

#### COMMERCIAL FERTILIZERS INCREASE CROPS

All of the foregoing practices are highly important, but they are not always sufficient to return to the soil the food elements taken out by the crops. Commercial fertilizers used in conjunction with farm-yard manure will usually give best results. Nitrogen, Phosphoric Acid and Potash are the food elements supplied by these commercial fertilizers. It is always wise when purchasing these to insist upon an analysis showing the available quantities of these plant-food elements. Study the guaranteed

composition that must be printed on each bag of fertilizer sold. Information will be sent upon request to the Department of Agriculture which will enable you to make a satisfactory comparison of different analysis.

#### WHAT DOES MY SOIL NEED?

That is the question each man must ask himself in studying this fertilizer question. The needs of different soils vary according to the crops grown in the past, the manure previously applied and the character and origin of the soil.

First: Send a representative sample of your soil to the Department of Chemistry, Ontario Agricultural College, Guelph. Give information regarding subsoil, drainage, the crops that have been grown and the crop you expect to grow this year—and what manure has been applied for the past three years. An examination will be made and as much information given you as possible.

Second: There is no doubt that commercial fertilizers have an important place in Ontario farming when used as a supplement to farm-yard manure and good cultivation. In order that you may note the results of applications, always leave a strip through the field unfertilized so that the effect of the fertilizers may be observed.

For full particulars regarding any phase of the fertilizer question write the Office of the Commissioner of Agriculture, Parliament Buildings, Toronto. Send for Bulletin 223, on "Fertilizers," and Bulletin 238, "Lime and Its Uses in Agriculture."



Ontario Department  
of Agriculture  
Parliament Buildings, Toronto  
SIR WM. H. HEARST,  
Minister of Agriculture  
DR. G. C. CREELMAN,  
Commissioner of Agriculture

THIS THIN CROP  
DOES NOT PAY  
PRODUCTION COSTS



PROPER METHODS  
OF FERTILIZING WOULD  
INCREASE PROFITS

can be obtained when soil is properly fertilized