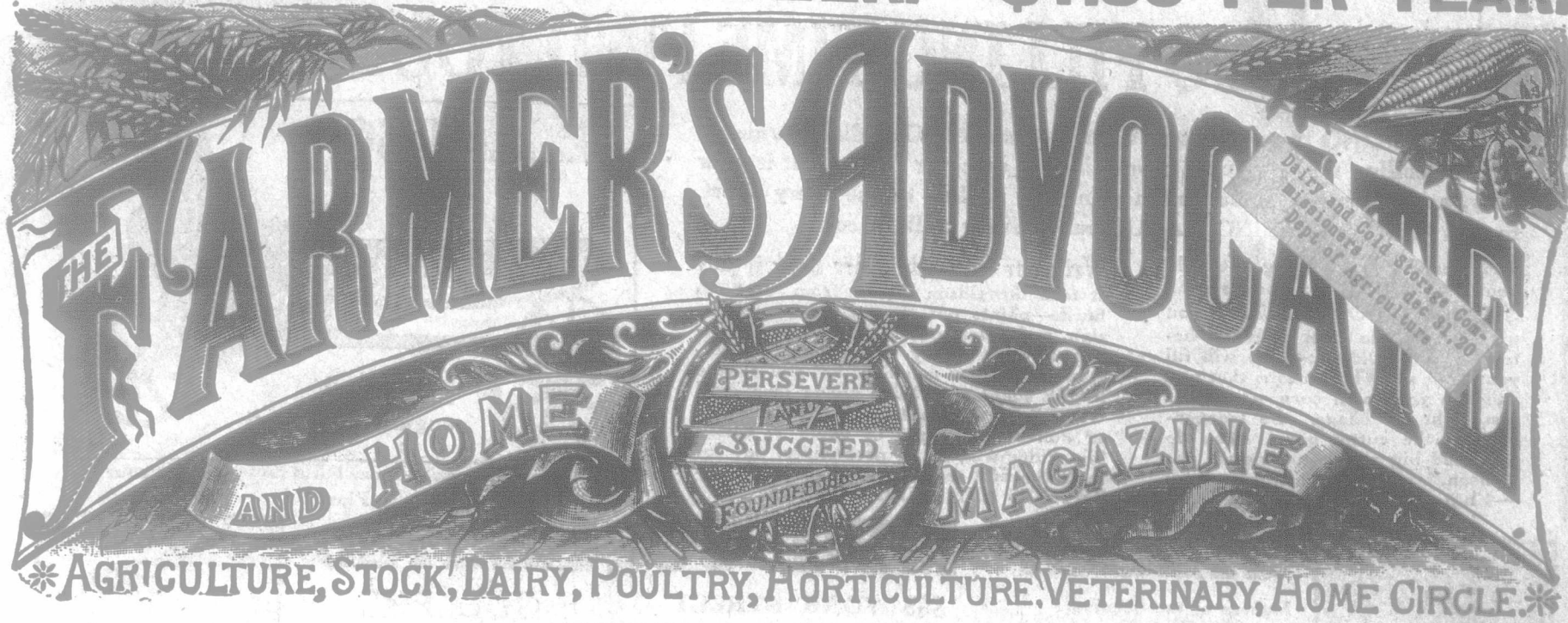


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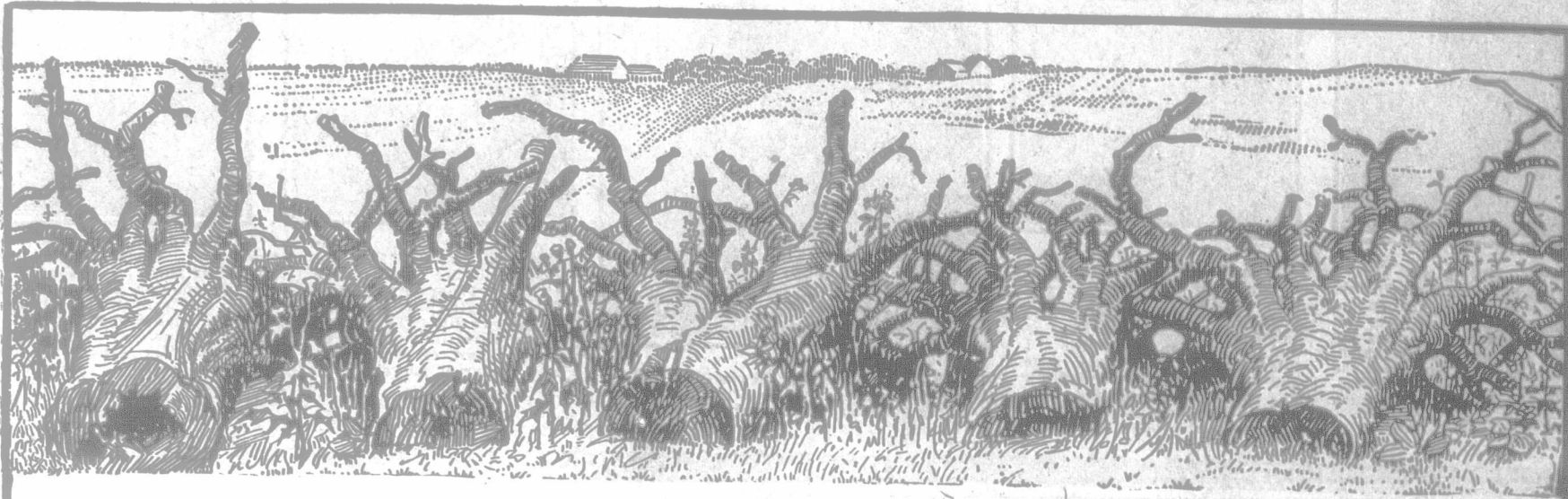


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LV.

LONDON, ONTARIO, JANUARY 29, 1920.

No. 1427



## Farmers Being Robbed by Stump and Snake Fences

Why go to the bother of plowing up the mustard, twitch grass, thistles, burdock and other weeds that afflict your fields if you leave them the safe refuge provided by the old snake or stump fence?

In the corners and recesses of these old fences the weeds grow and breed, and their seeds blow into your wheat, barley and oat crops, and into all your fields.

The only way to ensure clean fields is to do away with these breeding places—these old snake and stump fences—that are robbing the farmers of Canada of hundreds of thousands of dollars each year.

Haul away that old fence of yours and sell it for firewood.

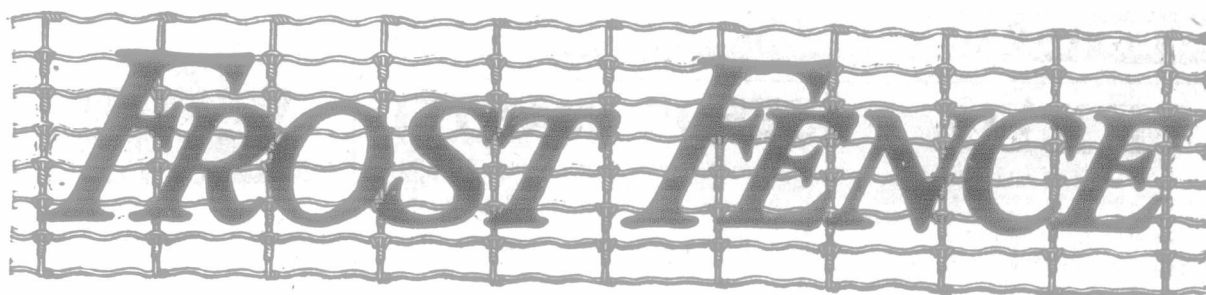
Put up a Frost Wire Fence—a fence of which you will be proud—a fence that provides no breeding place for weeds.

You can plow up to nine inches from a Frost Fence, and you can use the scythe or hoe right under the lowest wire. You can get right at the roots of the weed evil.

A neat, attractive Frost Fence—the fence of quality—will also improve the appearance of your farm, and make it more valuable.

### The Frost Steel and Wire Co., Limited, Hamilton, Canada

Manufacturers of Galvanized and Bright Wire, Hay Wire and Bale Ties, Woven Wire, Farm and Ornamental Fences, Galvanized Gates, Manufacturers' Wire Supplies.



### The Damage Weeds Do

This authentic information is taken from Ontario Government Bulletin No. 188:—

Weeds rob the crop plants of the food in the soil. For example, an average mustard plant pumps from the soil about fourteen ounces or seven-tenths of a pint of water per day.

Weeds mature their seeds before the crop plants, and draw heavily upon the plant food in the soil, thus leaving less available for the crop plants when they require it to mature their seeds.

Weeds shade, crowd and choke out useful plants. They increase the cost of every operation in the preparing of the land, and in the seeding, cultivating, harvesting and marketing of the crop.

The market value of seed grain, clover and grass seeds is much decreased by the presence of weed seeds.

Weeds often harbor or favor the development of injurious insects and fungus diseases.

No man cares to buy a weedy place if he can secure a clean one.

# WILL SILO FILLING TIME FIND YOU READY?

**S**ILO FILLING time will soon be here—and the Canadian Farmer is depending upon the corn crop this year as never before. It is your duty, and it will mean more money in your pocket, to use every effort, to get ALL the FEEDING VALUE out of every stalk of corn.

The most important thing is to silo your corn crop when it possesses the GREATEST FOOD VALUE. If you get a Gilson Silo Filler EARLY—before we are sold out—you will fill your own silo. This means that you will silo your own corn when it is just right for silage. Be independent of the cutter gang. You do not need big power to operate the "Gilson." Your own farm engine—4 h.p. or larger—will do the work.

**Write for Free Silo Filler Book to-day** It tells the Gilson Story from start to finish—points out the advantages of design, and describes the all-metal construction in such a way that you will understand WHY our machines cut and elevate MORE silage with LESS power than ANY OTHER Blower Cutter. This is a matter of dollars and cents to you. A Gilson Silo Filler will, in all probability, pay for itself the first season. BEWARE OF IMITATIONS AND INFRINGEMENTS.



The Wonderful GILSON

Your small engine will run it

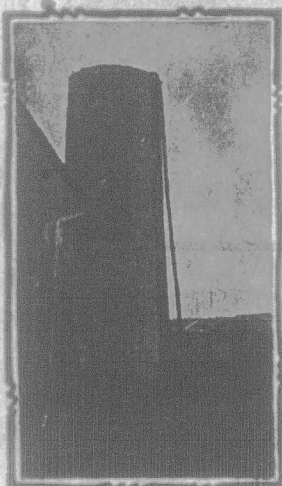
It is as much a part of your Farm Equipment as your Binder or Plow.

## GILSON MFG. CO., LIMITED

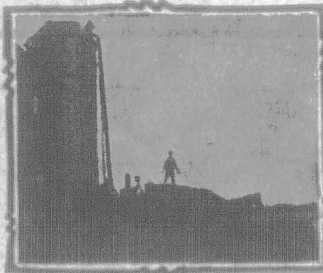
Makers of the Genuine and Only GILSON The Lightest Running Blower Cutter made

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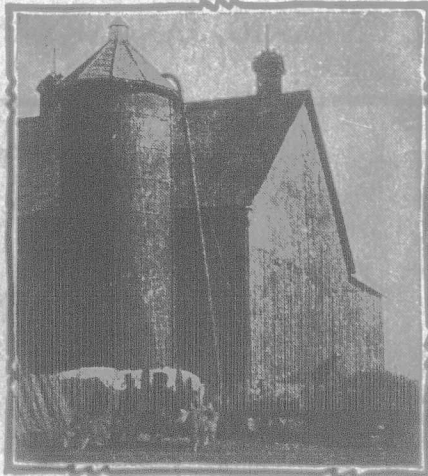
GUELPH ONTARIO



"My silo is 40' high," writes Frank Bolton, Guelph, Ont. "but my 8 h.p. engine which I purchased from you nine years ago operates my 12" ensilage cutter splendidly, sending corn over the top in a steady stream. This outfit is the admiration of all who see it."



John H. Murray, Sea View Farm, Cap La Ronde, C.B. N.S., writes: "Enclosed find picture of my 10" Gilson Silo Filler, 6 h.p. Gilson Engine and 30' Gilson Hylo Silo. I filled my silo with oats, peas and vetch, and it is coming out fine and not a bit spoiled. My outfit does splendid work and I am very well pleased with it."



Fred Huether's farm showing his 8 h.p. Gilson Engine and 12" Gilson ensilage cutter filling his 30' Gilson Hylo Silo.



Jacob N. Halst, Ridgville, Ont., writes, "The enclosed picture shows our 12" Silo Filler and 12 h.p. Gilson Engine hard at work filling our silo. This outfit works beautifully and is as much a part of every farm as a binder or mower."



M. I. Adolph, of Gowansville, Ont., declares that his silo filling outfit "is a source of real satisfaction and profit. I would not want to be without my 10" Gilson Silo Filler, 8 h.p. Gilson Engine and 12x30' Gilson Hylo Silo. I have used it for three seasons, and have had practically no trouble—it was always ready when wanted."

38



"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.

35

### I WONDER IF MY NEXT YEAR'S CROP WILL BE A SUCCESS

Why wonder? You can have a record crop if you wish. NOW'S the time to look ahead. NOW'S the time to plan.



WRITE FOR OUR FREE BOOK—"Feeding the Farm."

It is a recognized authority on manure and the right way to handle and spread it. It gives you many helpful ideas on improving the texture and fertility of your land.

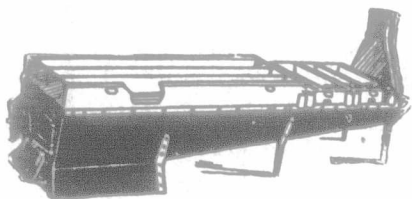
The GILSON Nisco will meet all your requirements.

GILSON MFG. CO. LTD. GUELPH, ONT.

36

### Bill's Sugar and Syrup Wasn't Up To Much

That's what his neighbors said, they were right too, but there were reasons, his sap was not fresh enough or clean enough, his boiling outfit was out-of-date and he scorching the whole batch. He did a lot of hard work with poor results. It is all a question of proper outfit. With a

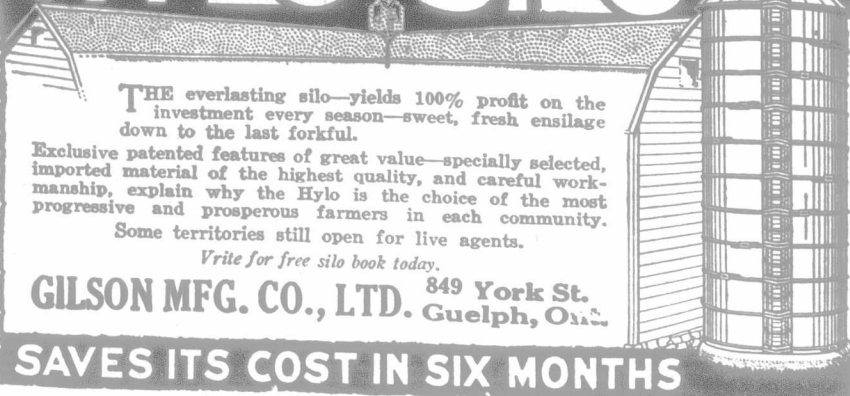


GRIMM CHAMPION Outfit

in your maple grove you are sure of making the best possible syrup and sugar. Do it cleanly and quickly and get more money out of it. Scrap your old outfit and make something worth while out of your sugar bush. We can help you a lot if you write us.

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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 Hylo is the choice of the most progressive and prosperous farmers in each community. Some territories still open for live agents.

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GEO. KEITH & SONS Seed Merchants since 1866 124 King St. East

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We are in the market to buy Alsike, Red Clover, Timothy, White Blossom Sweet Clover. If any to offer send samples and we will quote you our best prices F. O. B. your station.

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Either in log or board. T. F. Shurly Co., Ltd., St. Catharines, Ont.



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With a reasonably good soil and rainfall and the liberal use of Harab-Davies Fertilizer, you can be sure of a potato crop superior in both quantity and quality. The potato shown in our illustration was grown by a New Brunswick farmer who is a consistent user of Harab-Davies Fertilizer. He sent us this potato as a good average sample of his crop. There's no magic about it. Harab-Davies Fertilizer is simply an efficient plant food, containing Nitrogen or Ammonia, Phosphoric Acid and Potash in readily soluble form. Its record of success is its truest recommendation. Write us to-day for our booklet, "Fertilizer Results by Satisfied Users." It will be sent free on request, and it will give you evidence in the shape of signed letters from farmers in all parts of the country who know by experience how profitable Harab-Davies Fertilizer is.



### Harab-Davies FERTILIZERS

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BENIAH BOWMAN, Minister of Lands, Forests and Mines.

## Poor Old Folks—

Looks as if they'll have to go "over the hill to the Poor-house."

Their children either can't or won't support them. Tragic? Yes! But not half so tragic as the old folks' remembrance of the fact that their present plight is due to their lack of foresight in not making provision for their declining years.

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A small amount invested annually for a few years in an Imperial Endowment Policy will enable you to end your days in comfortable independence instead of as a burden upon the charity of friends, or in a paupers' home.

May we tell you about the income you can insure for yourself 20 years hence, by making small payments now when you have the money?

Don't wait—write for particulars to-day.

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The Imperial maintains for policyholders' protection a larger Government Deposit than does any other Canadian life company.

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Buy your fencing now and save money. Prices of wire products are advancing. With our large stocks of fencing on hand we can still offer you special prices.

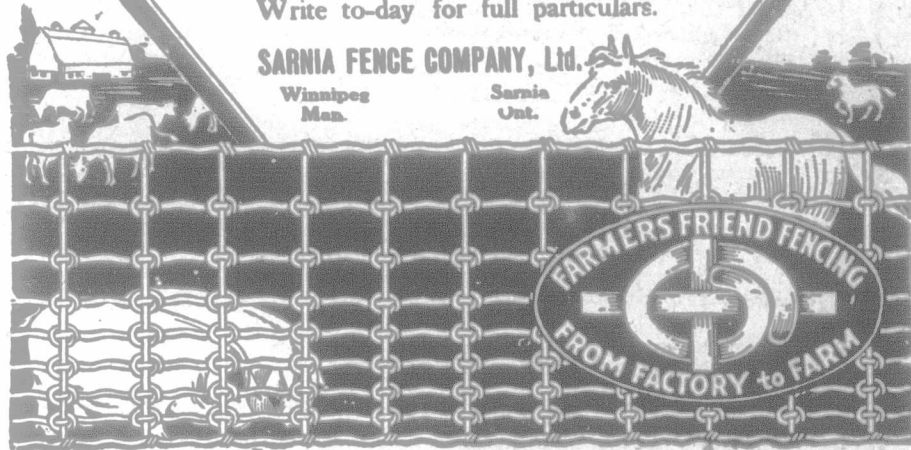
Full Government Gauge Wire at **30c** per rod and up.

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Enough for 2 or 3 sets—attracts all flesh eating animals—is put up in tubes (like tooth paste)—not affected by rain or snow. Economical to use, handy to carry.

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Sample bait and catalog Free for the asking—send to-day.

Address in full as below

There is **BIG MONEY** IN TRAPPING when you ship your **RAW FURS** to **John Hallam Limited**

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HYLO SULO

dolph, of Gowan... declares that his... is a source of... and profit. I... want to be without... on Silo Filler, 8... line and 12x30'... Silo. I have used it... seasons, and have... really no trouble—it... ready when want...

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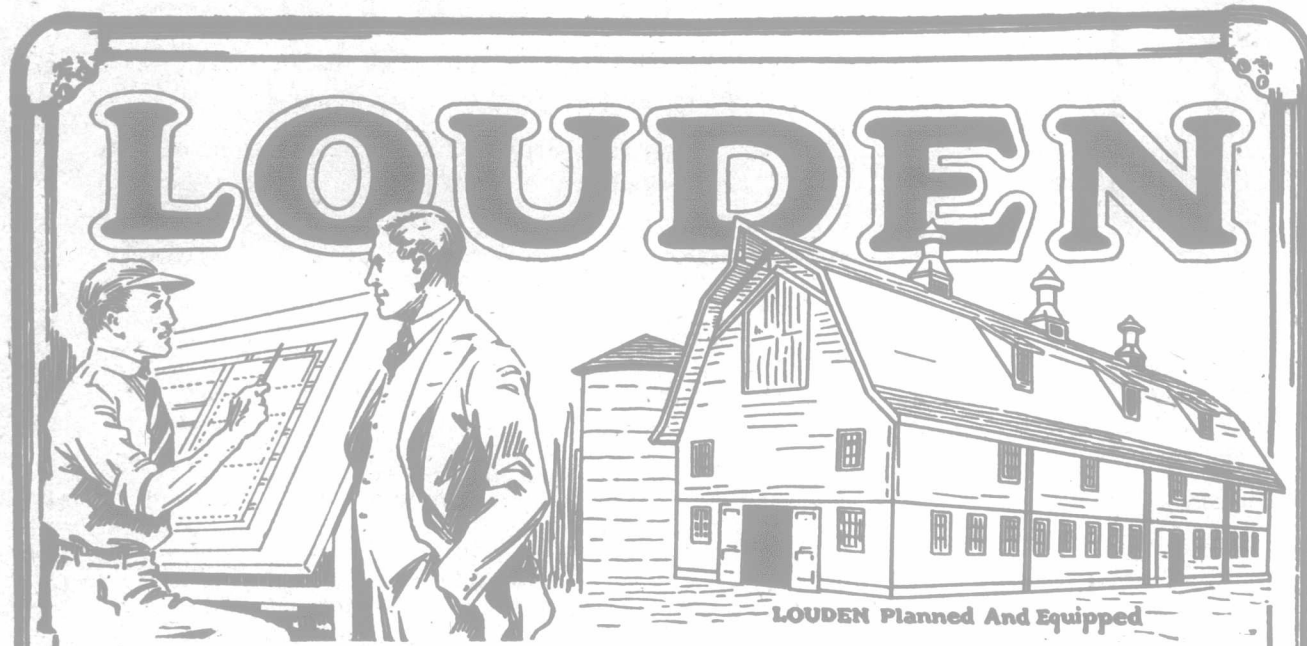
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OUR 112-page Barn Plan Book is worth money to every farmer who is going to build a new barn or remodel his old one. Seventy-four of the most modern barns on this continent are illustrated, including floor plans.

This book is not our catalog. The Louden Barn Plan Book was prepared by architects who specialize on barns and other farm buildings, and who have gathered ideas from farmers in different sections of the country. Naturally, in such a book, you will find many ideas new and valuable to you.

### COVERS EVERYTHING

This book discusses the values of different kinds of building materials and the advantages of various methods of construction. It deals with ventilation, drainage, lighting, and contains a valuable chapter on mixing and laying of concrete.

This book is worth money to any farmer going to build or remodel.

### MAILED FREE

We are not asking you to pay a cent for Louden's Barn Plan Book. Simply fill in the coupon, clip it out and mail to us. We will send you the book by first mail.

Send us a rough sketch of your old barn, showing location of windows, doors, etc., and state number of horses and cows you want to house, and our Architectural Department will show you

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In a Louden-planned and Louden-equipped barn, cows produce, on a conservative estimate, two quarts more milk per cow per day. Healthful, contented cows in clean, sanitary quarters, always produce more milk and actually consume less food.

Louden Barn Equipment will make money and save money for you. The Louden Machinery Co. has been established in Canada for twenty years and knows Canadian conditions thoroughly. Louden Barn Equipment is designed and built to meet these conditions.

Fill in the coupon and get this valuable 112-page Barn Plan Book.

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Head Office and Factory—Crimea Street, Guelph, Ontario

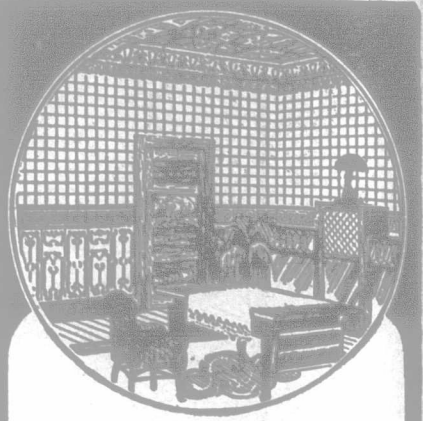
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I expect to build new barn, size..... by..... in month of.....  
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I expect to equip barns with..... in month of.....  
I want to house..... horses..... cows..... calves. I attach rough sketch (yes or no).....  
Rural Route..... Province.....

Signature

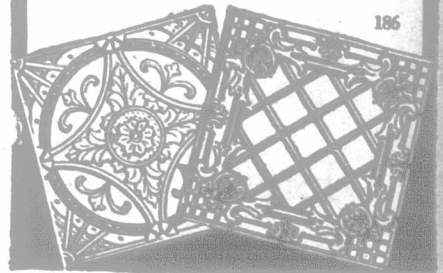


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### Barn Timbers For Sale

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# The Farmer's Advocate and Home Magazine

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I.V.

LONDON, ONTARIO, JANUARY 29, 1920

1427

## EDITORIAL.

Let the hum of the fanning mill be heard throughout the land!

Save the very best from the bin for seed, and feed the inferior grain!

Inspect the cattle occasionally for vermin, and if such is discovered, apply the remedy.

Some of the ice which is so plentiful now will come in handy next summer. Don't neglect the ice harvest even if some is stored only for use in the house.

A man must love his work to be really successful at it. Those working solely for the pay cheque are prone to do their duties in a mechanical manner.

The man who seeks an office is not likely to render as valuable service as the man sought after by the office. The success of any organization depends a good deal on the men at the head.

Do not leave the purchasing of seed grain, clovers, grasses, corn, etc., until a week or two before they are needed. Most farmers know now the quantity they want to sow, and it is well to have these things on hand.

Farmers suffer through the extravagance of others and are obliged to pay more than commodities are worth simply because urban dwellers, who are spending too freely, do not examine the price ticket or the quality of the article they are buying. Styles and prices are now regulated by the unwise and profligate spender.

Fat stock shows are to demonstrate what can be done in the way of breeding and feeding prime bullocks, sheep and swine for the block. Some men have shown very ordinary feeders in fat classes just because there was a chance to secure a little prize money. It is a good thing that this type of live-stock men are in the minority.

If the special Government prizes are to fulfil their purpose and be educational, first prize money should not be awarded to animals that do not measure up in quality and fit to the requirements of the class. A red ribbon indicates a certain degree of excellence in the animal to which it is awarded, and a wrong impression might be created by giving a first prize to a mean individual simply because it happens to be the best in the class.

The Allied Powers might well forget the Kaiser, who already stands condemned at the bar of public opinion. He is now an outcast, and a more severe form of punishment than is being meted out to him at present would only elicit sympathy for a feeble, senile derelict. The Kaiser is not the greatest problem the world has to face to-day, and the statesmen of Europe could better employ their time than trying to wrest the fallen Emperor from the Dutch who seem to love him so.

Our agricultural colleges and extension services might teach the finishing and marketing of live stock more than has been the custom in the past. The pure-bred and breeding end of the business has been emphasized, and rightly so, but producers generally do not know the market grades of live stock and their relative values. The stock yards furnish a great deal of information which ought to be taken to farmers, or young farmers assembled for short courses might well be taken to the stock yards, where convenient, so as to get an idea of what happens at these great marketing centres.

### The Civil Service Squabble.

It is a question which illegitimate child of the present Government, the Board of Commerce or the Civil-Service Commission, will go down in history as the greatest disrupter of the agricultural industry in this Dominion. The Civil Service Commission has through its iniquitous and stupid reclassification demoralized the Agricultural Department at Ottawa, destroyed morale, stifled enthusiasm and practically chloroformed the whole agricultural staff. In the eyes of the "expert classifier" an agriculturist is branded, and no matter what department of the Government may number him as a servant he is given scant consideration. Valuable experts are leaving the Department, and others have resignations all ready to present as soon as they find other positions. The result is simply this: All the promising young men trained by the Government of Canada at the expense of the people are getting into commercial work as quickly as they can, or into other lines where they will be laboring in the interests of the few instead of in the interests of the many, and the Government will continue to carry on a technical training school for the benefit of the manufacturers and commercial interests of this country. There may be too many civil servants, but there are already too few experts whose labors in a year would mean thousands of dollars saved to the farmers of Canada. Unfortunately, the Minister of Agriculture, Dr. S. F. Tolmie, has been ill at his home in Victoria and unable to use his influence to the utmost in behalf of the particular branch of Government over which he presides. Happily, however, Dr. Tolmie is recovering and is expected East about the first of February. When he does arrive he will find a very critical situation and one that will require the efforts of a thoroughly well man to deal with. In addition to the chaos resulting from the Civil Service reclassification it is generally understood that agriculture is dealt with very harshly in the estimates to be placed before Parliament during the next session. Such action as this would be very inopportune and unwise at the present juncture, and Dr. Tolmie cannot afford to sacrifice his good reputation by condoning, for the sake of the Government, the present reclassification or shouldering the responsibility for reduced appropriations for agriculture at this time. A Minister of Agriculture has one powerful weapon, and only one with which to fight his battles in a Cabinet Council at Ottawa, and that is his Resignation. Should the Minister fail to obtain for the farming industry of the Dominion the recognition it deserves, he can still make use of the weapon to which we refer, and should he wield it, the generous approbation of the farming population generally will be a greater reward and promise more for the future than would a continued alliance with the Government of which he is a member.

### Swine Raisers are Anxious.

The Canadian Swine Breeders' Association and the Ontario organization might well devote a little attention at their coming meetings to the status of the industry in this country in so far as the raiser of commercial stock is concerned. Farmers admit that they can feed their home-grown grain to hogs and get market prices for it, but all they receive for their labor is the manure. In these days of 25 to 200 per cent. profits in other lines, a small manure pile is not looked upon as a satisfactory dividend. More than that, the hog business has been so manipulated by the Board of Commerce that farmers became suspicious of the future, and nothing official has been said since early last fall about the export trade. The West cleaned out its brood sows, and Eastern Canada made no great effort to conserve them. We are short of breeding stock simply because of the uncertainty, or, to put it in barn-yard language, because farmers "don't know where they're at."

The liquidation of breeding stock last autumn was

much to be regretted as were the circumstances which brought it about. We are confident, however, that the best policy is to carry on to the extent of one's possibilities, for in the end the swine industry will be one of the best branches of agriculture, and we should take the long rather than the short view of the situation. We can understand, nevertheless, why those with large swine herds reduced the numbers, but the average farmer with one sow or two ought to, in his own interests if for no other reason, endeavor to keep his production up to normal and be ready when the business begins to improve. The breeders of pure-bred swine, when assembled at Toronto, might well make it their business to investigate the conditions and circumstances surrounding the marketing of hogs, and endeavor to give some information to the producing public that will clear the air and restore confidence.

### Every Farmer an Experimenter.

Farmers individually have no time for extensive or exhaustive experiments, but the time has come in Eastern Canada when it is almost necessary for each farmer to be an experimenter on his own farm, and find out what each field lacks in the way of soil ingredients, and what crops are best adapted to his particular location. Soil surveys have been made, but if work were carried on in the Province of Ontario for twenty-five years investigators and chemists would not be able to tell individual farmers what their soils needed most, unless they happened to take samples on those particular farms and carry out experiments in connection with them. This would be impossible. Any advice chemists or investigators would be able to give will be of a general character, and after all the farmer will have to go about it blindly or else experiment for himself. There has been a good deal of tradition and broad statements mixed up in the advice handed out to farmers. For instance, dent corn has been generally recommended as the best kind for silage production, because it gives the largest tonnage per acre and a fair maturity in most sections. It is a question in the minds of many whether dents will really out-yield flints in northern and eastern districts, and even if they do, probably the superior maturity in the flint varieties will more than counter-balance the extra tonnage produced by dents. Farmers could easily answer this question for themselves by small experiments on their own farms, which would not entail any great additional labor. We have been dealing largely in generalities when discussing varieties of crops, and it is time that farmers decided for themselves just what is best adapted to their particular farms and fields.

### A Thrift Campaign Needed.

Canada's greatest need to-day is a nation-wide campaign urging a pleasure-mad, luxury-chasing people to turn from the path of wanton extravagance to the highway of thrift and sensible living. Since munition wages set the minds of men and women in a whirl, there has been a headlong rush for expensive non-essentials; human labor and industrial machinery of the nation have been switched from the production of staple articles to the manufacture of gaudy and unnecessary luxuries, and the sad part of the story is that those who need most to save up a little for a rainy day are the most profligate in their spending. The commodities placed on the market and the price-list attached are determined not by the purchasing habits of the sober-minded, thrifty classes, but by the majority of buyers who are found in towns and cities where the so-called working classes are spending and buying as people never spent or bought before. Good, sensible staples are now dear because they are scarce, and everything else is expensive because people will pay the price. In this way the wise are forced to suffer with

"Ceilings  
t, beautiful!

paper worries,  
with falling plaster.  
Metallic Ceiling and  
you have a per-  
stary, fire-proof  
y beautiful and  
soap and water.  
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## The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE  
DOMINION.

Published weekly by  
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal,"  
Winnipeg, Man.

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2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries, 12s. in advance.
3. ADVERTISING RATES.—25 cents per line, agate, flat. Live-stock advertising rates given on application.
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the unwise, and all are swept along together in the mad rush of post-war extravagance. Amusement houses are crowded to the doors, and the accommodation is being expanded as rapidly as possible. The manufacturers of luxuries are reaping a harvest, and every inducement is being put before the public to spend and think not of the morrow.

Anyone urging conservation and thrift can well be likened to one crying in the wilderness, but what we need to-day is a thrift campaign conducted by an organization such as that which made our Victory Loans a success. Financiers, commercial interests, agricultural organizations, the press, and all influential individuals or groups should join with the Government in conducting a campaign that will touch the minds of the people and show them the folly of their way. Thrift clubs should be formed, a demand for sensible staples should be created, and all public-spirited citizens ought to set an example of saving and sane living that will restore the equilibrium and help everyone to keep his feet on the ground. We cannot go on this way much longer and squander the labor and wealth of the nation on luxuries and non-essentials. We have been living in an atmosphere of artificial prosperity, and any day the curtain may be drawn back revealing the cold, stern realities of the future.

### The Happy Medium.

By ALLAN McDIARMID.

Once upon a time, as the story goes, there was a young man who lived on a farm with his uncle. This uncle was getting along in years and had begun to think of retiring to the nearby town and taking a rest during the years of his life that might still be remaining to him. The young man, his nephew, was quite willing that he should, for he felt very capable of running the "old man's" farm and of taking charge of the live-stock, of which there were about forty head, including horses and cows.

So matters were soon arranged and the prospective farmer started in to make his fortune—and get his experience. His first move was to buy some calves from a neighbor who was getting rid of his grade herd and going into pure-breeds. He hadn't much idea of the type of animal he wanted or anything like that, but the

thought in the back of his head was urging him towards something better and it expressed itself in this way, getting something that he fancied was an improvement on what he already had. It's not a bad plan either, for if one doesn't gain in wealth by transactions of this kind he will in experience. It's better to be doing something even if it's making a mistake.

But the trouble with our young farmer was that he hadn't learned to feed the stock he already had before buying that which was more expensive. It has been said that Experience keeps a dear school but it's a fact that some men pay out a good deal more in tuition fees for their training than do others. A little caution isn't a bad thing until one is sure he is on the right track. But caution and youth don't very often travel in company and this young man was in a hurry for results. He needed money to pay for the stock he was buying, as well as for the other apparently endless expenses of the average farm, so he sold his grain and some of his hay and fed his cows on straw and corn-stalks, with a few turnips thrown in occasionally by way of quieting his own conscience, for he had an uneasy feeling, sometimes, that he was not doing exactly the square thing by the cows that he expected to make money for him.

Anyway, the natural result followed, as was to have been expected. He lost as many as four of his cows in one spring, all due to underfeeding. In other words, they died of starvation. And among them were some of the grade heifers that he had bought to improve his herd.

This happened for three or four years in succession. The cause of his misfortunes did not seem to dawn upon him for some time. However, it finally struck him that he would have to make some change in his methods or he would shortly land on the rocks. He resolved to feed whatever grain he had, instead of selling it and, if necessary, to buy more so that his milking stock, at least might have everything in the way of feed that they needed.

By this time he had purchased a few pure-breeds and was beginning to congratulate himself that the worst was over and the end of his troubles in sight. He began to keep records of the performances of his best cows and started in to feed them as heavily as he thought they could stand. He was something of an extremist, all right. He hadn't mastered all the lessons that were being taught in the school he had entered. One morning, on coming to the stable he found a pure-bred cow, that he had been particularly good to, stretched out, stiff and cold, the result of an extra heavy feed of grain the night before.

Later on one of his heaviest milkers showed signs of inflammation of the udder and it became very difficult to get the milk from one quarter. So he got a milk tube from the local "Vet." and drew the milk away by that means. He did not reduce the cows feed any, however, as he was working for a record and wanted to keep her up to her limit.

The inflammation spread and the whole of the cow's udder became infected through the use of the milk-tube. The cow didn't die but she gave him no more milk that year.

Having been told that, if he wanted to have his cows do their best in a yearly, or even a seven-day test, he should have them all "rolling fat", he bought a large amount of commercial feeds and started in to get them ready. That spring three of his best cows lost a quarter through inflammation of the udder and another died outright from a further development of the same trouble.

This was about as bad as having them die of starvation. There isn't much choice between extremes. Our farmer hadn't yet found the "happy medium" that graduates one from the School of Experience.

One of the cattle Judges that we have had in this country from England lately said: "I view with the deepest concern the overfeeding that is apparent in the breeding stock of this country, especially among the females. In the whole course of my experience I have never seen animals fed so excessively. Such feeding must destroy fecundity."

But this expert opinion wasn't available to our erratic friend at the time he was taking his medicine. He was getting his knowledge first-hand, at the time. He will probably agree very heartily with the words of the Judge, however, if he should happen to see them as given in the papers.

Things have been going somewhat better with our friend lately. He buys very sparingly of certain feeds, such as oil-cake or cotton-seed meal, but feeds most of what he raises on his own farm, which includes oats, barley, wheat and clover and mixed hay, and, of course silage. His stock seem healthier and there have been no funerals from his stables during the past two years.

To my way of thinking there isn't a better job on the face of the earth than dairying when it is carried on as it should be and as it can be when the necessary knowledge has been acquired by study and practical experience. It's an all-the-year round occupation, it's profitable and it's interesting. And, if you like, it's a character developer. Self control and a good many of the other virtues are learned in the cowstable.

There's a good deal of hard work in connection with it. There's no use trying to deny that. But if you make any line of farming easy you take the real good out of it, in a way. Earning one's living by the "sweat of the brow" isn't pleasant to think about, but it is the way a lot of good men developed all the best things they have.

But the question that nine out of every ten men, who are thinking of taking up this line of farming, will ask is, does it pay?

Sure it does, just as soon as you know how to handle your cow and the material she produces. The farmer is richer, his farm is richer, and the world is richer because of the dairy cow. All that is needed is to get a thorough knowledge of her limitations and possibilities.

### Nature's Diary.

By A. BROOKER KLUGH, M.A.

THE ORIGIN OF CULTIVATED PLANTS. I.

We make use to-day of a very large number of cultivated plants, growing a good many ourselves and importing the products of a great many others. Seeing how intimately connected with our every-day life these plants are, it is but natural that we should be interested in their origin, in knowing in what country, and by what people, they were first brought under cultivation.

Our knowledge of the origin of cultivated plants is derived from four sources—botany, archaeology, history and philology. By the study of botany we seek to ascertain in what country the species exist to-day in the wild state, and when carefully prosecuted the evidence thus derived is of the soundest character. The chief difficulty in this method of investigation naturally lies in distinguishing between plants which are native to the region under consideration and those which have been introduced, and with the increase in transportation facilities this difficulty becomes more pronounced, since an introduced plant, if well adapted to the conditions of its new home, spreads with great rapidity and soon takes on the appearance of a native species. Archaeology, the study of ancient races and civilizations, furnishes us with very direct proof as to the origin of cultivated plants, since it often brings to light remains of these plants in old buildings, graves and waste-heaps. History throws some light on the origin of cultivated species, but the evidence from this source requires very careful scrutiny and sifting, because historical writers have rarely been men of scientific training, and have consequently been prone to reflect generally accepted impressions instead of facts which have been established by critical investigation. Philology, the study of languages, likewise sometimes aids us in our enquiry, but is almost as often likely to mislead us because of the erroneous and frequently absurd names adopted for cultivated plants. As examples of this we can quote the name ble de Turquie, applied in France to Maize, a plant which is not a wheat and which came from America and not Turkey, and Jerusalem Artichoke for a plant which came from North America and is not an artichoke. In the case of any given species the conclusion as to its origin is usually reached through data derived from a combination of these sources of information.

Wheat, *Triticum vulgare*, is one of the most important, if not the most important, plant to a great many nations. The cultivation of wheat is prehistoric as is proved by very ancient Egyptian monuments which show its cultivation as already established. When the Egyptians or the Greeks write of its origin they attribute it to such mythical personages as Isis or Ceres, and it is from the name of the latter goddess that our word cereal is derived. This habit of attributing the most important food plants to some deity, to some great emperor or culture hero, is common to many peoples. In some cases there is some basis for this belief in the fact that some ruler has urged the more extensive cultivation of the plant in question, or has imported it from some other country, but the real transition from the wild to the cultivated state has been accomplished by the gradual but persistent efforts of a whole people. A small-grained form of wheat has been found in the ancient lake-dwellings of Western Switzerland, and also in Hungary in deposits dating back to the early stone age. The Chinese grew wheat in 2700 B.C., and the Egyptians in 3359 B.C. Wheat as we know it to-day has not been found anywhere as a native plant, and archaeological, botanical and historical evidence seem to point to Mesopotamia as the home of the ancestor of this plant.

Oats were not cultivated by either the Egyptians, Hebrews, Greeks or Romans, though wild plants of the same genus were known to the Greeks as bromos and to the Romans as avena. The Romans found oats in cultivation when they entered Gaul, and they have been found among the remains of the Swiss lake-dwellings of the bronze age, and these facts, together with evidence derived from philology, show that oats were first cultivated in north-eastern Europe.

Of the three kinds of barley, the six-rowed, *Hordeum hexastichon*, was the species most commonly cultivated in antiquity. It has been found in the earliest Egyptian monuments, and in the Swiss lake-dwellings of the stone-age. We have no record of it as a wild plant, and the same is true of common barley, *H. vulgare*, the form with four rows, which is mentioned by the Greeks. Two-rowed barley has been found wild in western Asia, Arabia, in the Caucasus and in Turcomania. It has also been found in the Swiss lake-dwellings of the stone-age. In view of these facts it seems extremely probable that the two-rowed barley is the ancestor of the other two forms.

Rye, *Secale cereale*, has not been very long in cultivation. The Greeks do not mention it, and Pliny is the first Roman writer to do so. It appears to have been cultivated from about the year 100 B.C. in Russia, and was probably taken into cultivation in Tartary. It was subsequently widely distributed as a cultivated plant in northern Europe, as shown by the resemblance of the Anglo-Saxon name rye, Scandinavian rugr, Old German roggo, and ancient Slav roji.

(To be continued.)

## THE HORSE.

### Diseases of the Respiratory Organs.—III.

#### ROARING.

A horse is called "a roarer" when he makes a wheezing, whistling or hoarse sound during inspiration, and in very rare cases also during expiration. In most cases respiration is performed in the normal manner when the animal is at rest, or performing slow or easy work, but when subjected to hard or fast work he makes a noise as stated; the noise being made during inspiration. The noise is due to the fact that the calibre of the larynx has become lessened, hence, when from any cause, as hard or fast work, excitement, fear, nervousness or other causes, it becomes necessary for a large volume of air to enter the lungs, the forcing of this through the more or less constricted calibre of the larynx causes the sound, on the same principle that forcing air into a horn or bugle causes a sound. In many cases roaring is a progressive disease, the symptoms being slight at first and gradually becoming more marked, while in others it appears suddenly. Some roarers can perform ordinary work, either slow or on the roads, without exhibiting any symptoms of being affected, while others exhibit symptoms even when performing light work. The condition is sometimes simply a symptom of some acute disease, as an acute case of laryngitis, and the symptoms disappear upon recovery from the disease. In such cases it is simply a temporary unsoundness. The trouble often appears as a sequel to some respiratory disease, as laryngitis, strangles or even a severe case of catarrh or common cold.

The cause of roaring is, however, in the majority of cases, found to be due to atrophy or shrinking and fatty degeneration of some of the muscles of the larynx, while in others it is caused by a chronic thickening of its mucous membrane, or may be caused by a lessening of the calibre of the trachea or windpipe; while either, or both sides of the larynx may be affected, the trouble is much more frequently seen on the left than on the right side. The reason for this is involved in some mystery, but by veterinarians it is generally accepted to be due to the nervous supply to the organ; the supply to the left side differing to some extent from that to the right. Roaring is not a common sequel to diseases of the organs of the thoracic cavity. When it occurs as a sequel to disease it is generally conceded that it was a disease that affected the throat.

Many roarers, whose history can be traced to birth, have never suffered from any chest affection, nor indeed from any respiratory disease except common cold, and in some cases not even from this slight ailment. Many claim that the condition is often due to hereditary predisposition. It is a fact that the produce of certain sires or certain dams appear much more subject to the ailment than the progeny of other progenitors, and in many cases the cause cannot be traced to attacks of other diseases. There are other cases where horses appear particularly predisposed to laryngeal or other throat affections, and the infirmity under discussion appears after an attack of such. Roaring may be due to disease of the nostrils, a growth in the nasal chambers, depression of the nasal bones, the result of fracture, closing or partial closing of the nasal chambers by false membrane or disease of bone, tumors in the posterior nares, construction of the windpipe, diseases of the pharyngeal or salivary glands, or any other condition that lessens the calibre of the nasal chambers, larynx or windpipe.

In addition to the sound emitted during inspiration, the roarer may have a cough with a loud, harsh, dry sound, half cough half roar, and many of them are "grunters." At the same time, while many roarers are grunters, the too-common idea that all grunters are roarers is without foundation, as many grunters have no tendency to roar.

To test a horse for roaring, he should be ridden or driven at a fast gallop, with a free head for a considerable distance. Some horses that are perfectly sound in wind will make a noise if excited and driven fast with a tight rein, especially when driven with a curb bit, or if they have the habit of holding the head high and holding the nose inwards towards the breast. This compresses the larynx and consequently lessens the calibre. Such horses, when given a free head, will go sound.

Treatment.—If the sound can be traced to any removable cause, an operation by a veterinarian may remove it. When due to disease or altered condition of the larynx, as is generally the case, effective treatment is very difficult.

Many modes of treatment have been tried. Some claim benefit from blistering or firing the skin surrounding the organ, and in some cases it may be beneficial, but in order that it may be it must be practiced in the early stages of the trouble.

An operation is now performed that is successful in a sufficient percentage of cases to warrant its performance. It consists in cutting into the larynx and stripping the thickened mucous membrane of a part of the side or sides that are diseased. The operation can be successfully performed only by veterinarians who have practically made a specialty of it.

The sounds can be modified by plugging the false nostrils with cotton or arranging pads on the bridle, that press upon the false nostrils, thereby preventing their expansion, hence lessening the volume of air that can enter.

In horses in which the trouble is so marked as to materially lessen their usefulness, an operation called "tracheotomy," which consists in placing and securing a tube in the windpipe, through which the horse breathes, gives fair results. The tube has to be removed and cleansed occasionally, and then replaced. Some successful race horses have been treated in this way.

A horse that roars, even slightly, is unsound. It is probable there has been, and still is, more litigation on account of this trouble, in cases of sale of horses, than on account of any other form of unsoundness. WHIP



A Shire Foal.

## LIVE STOCK.

### The Secret of High Prices for British Live Stock.

EDITOR "THE FARMER'S ADVOCATE":

It is impossible to read the reports of Old Country live-stock sales and not be impressed by the uniformly high prices received at every sale. It is certain that we have not yet become able to approach the attainments of our English and Scotch friends as far as breeding and selling live stock is concerned. And yet in many breeds we are producing individuals just as near perfection, just as typical of the breed to which they belong, and really just as valuable as any produced across the water. Where then do we fail? The answer must be found in the fact that we are not as interested in the production of good live stock for the sake of producing it as we are in securing as large financial returns as we can possibly obtain. In short, we are not building up permanent flocks and herds. We continually sell our live stock to whoever will pay for it and start again to produce some more. We are satisfied to sacrifice whatever advancement we have gained by selection and good feeding for the temporary financial gains secured by the sale of our breeding animals. Until we start to build up a permanent live-stock business based on generations of selection and careful feeding and breeding, we can never hope to secure a strong share of the world's market for breeding stock. That we do not figure largely in this market now is indicated by the fact that since the war, when the meat-producing countries such as the Argentine, were buying good live stock to build up their breeding herds, their buyers invariably went to England or Scotland to secure breeding stock, while at the same time Canadian breeders could spare good stock. The enviable reputation of Old Country breeders, along with their years of continued work along the same lines, draws the world's live-stock buyers. But this was not accomplished in a single day, nor did it result without reason. Since the standard breeds of cattle, swine and horses were originated they have been improved through the years by breeders who followed the same general lines of selection, and so lost none of the progress made by their predecessors. In many cases families of cattle were kept continually for generations within one breeder's family, the sons taking up the work where their fathers left off. While the retention of the best breeding animals in British herds was, in many cases, the result of personal good judgment on the part of the breeder individually, it was at the same time aided by wise provisions made by the different breed societies.

It was made practically impossible for a British breeder to sell for export any animal that, in the opinion of the breed society, was an invaluable asset to the breeding stock at home. And, so the best have been kept for generations. Many Canadian breeders on attempting to purchase breeding stock in Scotland have been unable to understand why they were unable to even get a price placed on some choice animal. But, until we recognize the fact that we cannot afford to sell our best, we will fail to raise either our standard of live stock or our prices. That we have not yet learned this lesson is evidenced by the fact that American

breeders come into Canada constantly and carry off our best animals, while Canadian breeders are practically compelled to secure new blood from across the water to reinvigorate and improve their herds and flocks. Even then buyers from other countries outbid Canadians in the British market. The statement of Mr. Arkell, to the effect that from the standpoint of advertisement alone, it would pay us as a country to pay high prices for a few good sires from the best herds of Britain, is very true. That continuous selection pays is demonstrated beyond a doubt by the recent report of Mr. Duthie's Shorthorn sales in Scotland. From 1892, when he held a sale of bull calves averaging £23, the average price was raised to £1,400 secured at his recent sale for 24 calves. While general prices have advanced in that time, the advance was not nearly as great as that secured by Mr. Duthie. The fact that he kept his best calves and stayed in the business is largely responsible for his success. While he has been remarkably successful, he is not alone. There are scores of herds established for years that are securing as good results. From the standpoint of adding to the national wealth, no class of men have done more than these live-stock breeders.

The continued success of any individual business or of any industry depends ultimately on the integrity of those engaged in the business or industry. It is a tribute to British breeders that their integrity is unquestioned to-day. Some idea of how they have gained and maintained their present enviable reputation for straight dealing may be gathered from the following true incident. A Canadian Shorthorn breeder was desirous of securing a certain pair of bull calves included in a sale held by Mr. Duthie. He found himself in a position where he was unable to attend the sale, so he wired Mr. Duthie, asking him to buy the calves for him, when they were being sold. After they had reached a certain figure Mr. Duthie stopped bidding and another breeder got the calves. On explaining the matter to the Canadian breeder, Mr. Duthie said: "The calves were selling for more than I thought they were worth, so I felt that I had to protect your interests." By this action he possibly lost considerable money.

So, after all the high prices paid at British sales are justified, and we as Canadian breeders must build up a permanent business based on strict integrity if we are to improve our live stock and establish a reputation for square dealing equal to that held by our British friends.

Wentworth Co.

CHARLES M. FLATT.

### Specializing in Pigs and Sheep.

There are many different systems of farming followed throughout the Province. The owner of the land, to be most successful, must study his soil and conditions in order to determine the line of farming which will give best results. Then, too, some men can make a greater success with one line of stock than with another; consequently, it is impossible to set down any hard and fast rule that will hold good in all cases. The experiences of farmers who have made a success should be valuable to many engaged in farming. They show how certain lines are handled under existing conditions. William Murdock, of Wellington County, has a 250-acre farm adjoining a town, and has found it profitable to specialize in raising young pigs to sell to the commercial trade. From twenty-five to thirty brood sows are kept, and in conjunction with these a flock of from sixty to eighty ewes are handled, along with a small herd of Shorthorns. Mr. Murdock has made a specialty of raising young pigs to sell when from six to eight weeks old. It is only occasionally that he raises a litter to maturity. He finds a ready market for the pigs. His system of handling the brood sows may be of interest to some of our readers. The sows are all run together, their sleeping quarters being the basement of a barn 50 by 70 feet in dimensions. This floor, or a portion of it at least, is of concrete, and the grain is fed on it. This part of the floor is kept as clean as any trough. There is a supply of water available at all times. The sows run out on pasture during the summer, and at all times have plenty of exercise.

As farrowing time draws near, the sows are put in box stalls in the stable and are given lots of straw for bedding. This is contrary to the views of some hog breeders, but Mr. Murdock finds that this practice results in a very light mortality at farrowing time. Judging from the bed which a sow will make for herself under natural conditions, the system is right. Many can call to mind how the sow would practically bury herself in the straw-stack and would raise larger and more thrifty litters than are generally raised when the sows are housed in the most modern pens and given the best care and attention. One will generally notice that when there is an abundance of straw the sow will make a firm bed. The young pigs are unable to wander far away from her, and thus do not get chilled. Where the bedding is scanty, the sow is continually scratching it together to make a bed, with the result that at farrowing time it is usually damp. There is not sufficient to keep the pigs from wandering, and the result is that they get to the far side of the pen and become chilled, unless someone is at hand to rescue them. Mr. Murdock's stables are a considerable distance from where he lives, and he seldom bothers with the sows at farrowing time.

For a time he noticed that he was losing a number of the pigs after they were a week or ten days old. They seemed to disappear mysteriously, and he could

not account for it. One day while watching the litter take their noon-day meal, he noticed the sow suddenly jump up, grab a pig and eat it. On examining the young pigs, he found that each one had two pairs of sharp black teeth, and he came to the conclusion that the sow's wrath had been due to an injury from these tiny tusks. Obtaining a pair of pincers he broke off these teeth, and there was no further trouble. This operation is the general practice now with every litter.

The sows are kept in good condition through the gestation period, and have pasture in the summer and plenty of roots during the winter. No feed is given to the sow for twenty-four hours after farrowing, and a full feed is not given until seven or eight days have passed. The amount is gradually increased after the first day. As soon as the young pigs will eat they are given butter-milk. Being situated near a creamery, Mr. Murdock has been able to secure a considerable quantity of this by-product, which is so valuable in hog raising. Screenings are about the only feed used for sows or growing pigs. For this branch of the farm operations, practically all the concentrates are purchased. Plenty of mangels are grown, as they are considered essential in successful pig raising. At from six to eight weeks of age the pigs are disposed of to farmers who desire to raise and fatten them. Pure-bred Yorkshires are kept, and the preference is for a thick, heavy male with a not too heavy-bodied sow. The sows are kept in service as long as they are useful, which time runs as high as nine years.

In discussing hog pens, Mr. Murdock is not in sympathy with what is very often considered the modern type of piggery. He finds that where a number of pigs are running together that there is dampness in the atmosphere. If cattle can be kept along with the pigs, this trouble is largely rectified, as cattle produce a great deal more warmth than do pigs. The kind of walls would not concern Mr. Murdock as much as what was above them. He would want the ceiling of poles, or else of boards laid loosely and then covered with plenty of coarse straw. This would absorb the dampness and furnish a certain amount of ventilation. Recalling the old type of straw-stack piggery, this system should give good results. It is well known that where there is no loft filled with straw above the pigs, that the piggery is damp, even though the walls are built of lumber. The most expensive piggery is not always the best. Dryness and proper ventilation are two essentials to a good piggery.

The flock of Southdown grade ewes bring in a neat revenue each year. Those who have followed the reports of the Fat Stock Show at Toronto will notice that Mr. Murdock has been a competitor in the carload lots. Last year eighty-three lambs of the eighty-six dropped were raised. The flock is housed in rough out-buildings which are dry and afford plenty of fresh air. Care is taken to keep the pen clean, as it is found detrimental to allow the manure to pile up and heat under the sheep. The sheep are forced to take plenty of exercise during the winter, and are fed pea straw and a few roots in the early part; later on they get a little clover hay, and towards spring a few oats are added to the ration. A large acreage of rape is always sown for fall pasture for both sheep and hogs. This feed not only puts the ewes in good condition, but it is a fattening ration for the lambs. The aim is to breed so that the lambs will come fairly late in the spring. It is considered that the value of the wool clip and the comparative ease of caring for the late lambs compensates the owner for not raising early lambs.

In order to avoid trouble from grubs and other parasites, the sheep are never pastured longer than two years in succession in one field. It is found that under this system the sheep keep comparatively free from the above-mentioned pests. Sheep and horses should never be run together in the same field, as a few colts will do more damage than a pack of dogs. Mr. Murdock considers that sheep being such close grazers is one of the main reasons why people do not go more strongly into breeding them. Although this farm borders a town of about 2,000 in population, the owner of the flock has never had any loss from dogs worrying the sheep. This is rather remarkable, as it is very often considered that it is the dogs kept in town which do the greatest amount of damage.

### The Duroc-Jersey Swine Sale.

Unique in the history of the swine industry in Eastern Canada was the sale by auction of 39 lots of Duroc-Jerseys, at Chatham, on Thursday, January 15, 1920. In Southwestern Ontario, or more particularly in what is known as the Canadian Corn Belt, the "Duroc" has been gaining ground rapidly and the results of the auction sale manifested a great deal of confidence in the breed to convert the farm-products of that district into dollars, at a profit. It was with considerable temerity that the breeders undertook to dispose of pure-bred breeding stock in this unique manner, but the results were more than gratifying and the consignors were pleased with the appraisal put upon the offering. It was in the main a bred-sow sale and the strong line-up of reference sires catalogued, and to which the sows had been bred, insured or contributed very largely to handsome prices. Defender, Model, Colonel, Orion, and Principal breeding were much in evidence and the various lots offered were either rich in the blood of one of these popular strains, or in pig to the service of one of the boars so descended. The top of the sale was \$350, paid by E. J. Mullins, Woodslee, for Model Girl, a tried sow of splendid breeding. She is a good individual and her progeny have done well in the showing. She was bred by H. W. Mumford, Ann Arbor, Mich., and at time of sale was in pig to the service of Much Colonel's Principal 2nd. This Colonel-bred boar



Self-feeder for Pigs.

The Self-feeder can be used in the pen as well as in the orchard.

was champion at Toronto and London last autumn, and the prospects of getting a litter by him added to the value of the sow. She was consigned by J. W. Smith, Cottam. A June gilt—lean—12835—, contributed by Cecil Stobbs, Leamington, went to G. O. Robertson, Wheatley, at \$300. The best price for a boar was \$100, paid by J. O. Duke, Ruthven, for a July pig out of Model Girl, the \$350 sow.

The total of the sale was \$4,004.50 for 39 lots. Twenty-six bred sows averaged \$126.05; fourteen fall pigs averaged \$27.82, and 5 males averaged \$67.50.

Among the other lots sold for \$100 and over were Fancy, a yearling sow, to Ira Graham, Woodslee, for \$110; Hilltop Fan, to E. J. Mullins, Woodslee, for \$132.50; Kingsville Maid, to C. M. Ross, Thamesville, for \$132.50; Jane No. 8767, to John Wallace, Woodslee, for \$140; Cherryhill Queen 2nd, to Ira Graham, for \$135; Cherryhill Mabel, to John Luberville, Pain Court, for \$100; Cherryhill Queen 4th, to Ira Graham, for \$107.50; Beauty, to Thos. Dunn, Woodslee, for \$260; Sunridge Principal Fancy 2nd, to Harry Forbes, Tupperville, for \$110; Sunridge Principal Fancy 3rd, to Drury Bros.,

Bleheim, for \$130, and Jane—12836—to Dan Buchanann Thamesville, for \$120.

In the evening a well-attended banquet was enjoyed in the Chamber of Commerce rooms where addresses were given by Colonel M. R. Clark, Brimfield, Illinois, the auctioneer, and others interested in the Duroc-Jersey breed.

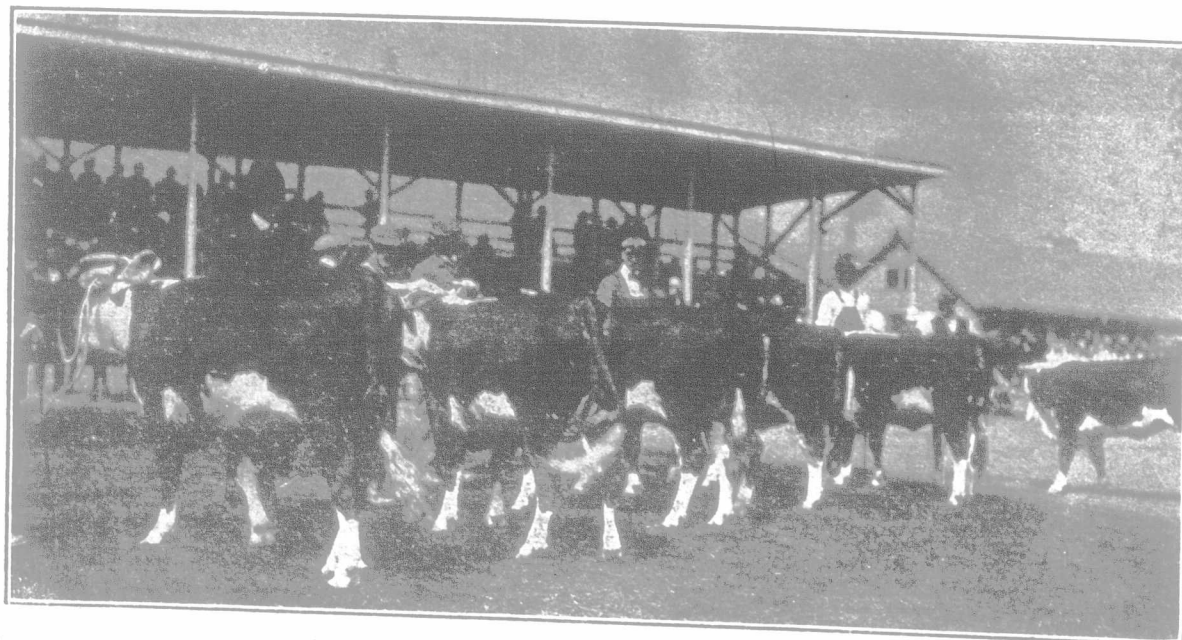
### Let the Boys Invest in Live Stock.

It is quite remarkable how quickly stock grows into money. On November 12, 1918, H. V. Keyes, of Dufferin County, gave an eight-months note for seventy-two dollars for a bred sow. This young sow raised him a litter of ten pigs, and on April 30, 1919, he received \$135 for them. The labor and feed of this sow and litter up to this time amounted to \$60, and inside of a year there was another litter of ten pigs and the boy still has the sow. It does not take much of a mathematician to figure out that this was a good investment. Similar instances could be mentioned, but yet we believe that the majority of young men pass out of their 'teens without ever having possessed an animal they could really call their own. This may be the boy's fault, or it may be the father's. We believe, however, that most fathers would be willing to allow their boys to make an investment similar to the one above mentioned, if the boys showed any desire to do so. The training which it would give would be of inestimable value to the boys in later years. It is surprising how ignorant of business transactions some of us are when thrown on our own resources. If we had a little training in banking, making deals for ourselves, etc., in our 'teens, we would possibly make fewer mistakes in regard to transactions later on. The calf and pig clubs which the Agricultural Representatives are starting in many of the counties are giving the boys, and girls too, an opportunity of getting good stock, and are providing means for the purchase of same. As a rule, a note is given for the initial purchase at a certain per cent. interest. Before the note falls due the progeny of the initial purchase will be marketable, or an opportunity will be given to sell the pig or calf purchased, in order to make the payment. Where these clubs are not being formed, parents might advisedly encourage the boys and girls to invest in some kind of live stock. Let them do the purchasing, sign the note, care for the animals, pay for the feed at market prices, and then sell the initial animal, or the progeny thereof, pay the note with interest, and use the surplus as they please. In many cases another animal will be purchased. At any rate, it will tend to increase the boys' interest in the work of the farm, and it will give them something to call their own to do with as they please. This line of work should be encouraged.

### Live-Stock Breeders' Meetings.

The live-stock breeders' meetings are to be held in Toronto the first week in February. Practically every breed association in Canada will be holding its annual meeting at that time. Breeders will be present from every province to transact the business of the association, and to discuss ways and means of furthering the interest of the breed. The dates of these meetings are published elsewhere in this issue, and no doubt every member of an association will receive notice of the annual meeting from his secretary. In the past there has been a tendency for the majority of the members to leave the work largely to the executive. The members very often remain silent during the meeting, and sometimes complain afterwards of clique rule in the association. If there is anyone to blame for this it is the members themselves. It is the privilege and duty of every member to be present and take part in the discussion and in the election of officers. It must be remembered that the success of the association is very largely determined by the kind of men elected to the directorate. Therefore, care should be taken in the selections of the directors. In this time of reconstruction there are policies of expansion to be discussed and decided upon. This should not be left to a few men, but should be decided by the voice of the members as a whole. Of course, there is sometimes difficulty in the case of a large meeting to get the voice of the members into concrete form; therefore, the directors outline a policy for the members to pass upon. It is not necessary to concur in all that the directors say, although in many cases they may have given a good deal of thought to the matter, and their plans are in the best interests of the association.

Besides attending the annual meeting, it is a splendid opportunity for members to meet breeders from other parts of the Province or Dominion. There is much to be gained by an exchange of ideas. The quiet chat with a breeder from the opposite end of the Province may be worth a good deal in dollars and cents. He may have worked out ideas that could be put in practice with beneficial results. Many men are rather reticent about making their plans or methods known publicly, but they are able to furnish a wealth of information in private conversation. Let every member endeavor to attend the annual meeting of their association this year, and if you have ideas beneficial to the association do not be afraid to make yourself heard. February 2 to 6 is live-stock breeders' week in Toronto.



Class of Junior Yearling Heifers at Toronto, 1919.



## THE FARM.

### Dr. Ryerson and Township Boards.

EDITOR "THE FARMER'S ADVOCATE":

The fact that Dr. Ryerson was an earnest advocate of township boards is one of the strongest arguments that can be advanced in support of this system of school administration.

Dr. Ryerson was not the first to advocate township boards in Canada. In 1831 a Bill was introduced into the House of Assembly by Mr. William Buell, Junior, "For the Promotion of Common Schools." In it he proposed to have the schools in townships managed by a local school board. But Dr. Ryerson firmly believed in the superiority of this system over our present system, and worked to secure its adoption throughout the whole period of his administration.

The School Act of 1850 as drafted by Dr. Ryerson, contained a section giving the townships local option in the matter of township boards. But the section as adopted by the Legislature was inadvertently so worded that no such board could be established unless a majority of votes in every single section was in favor of it. Consequently the section remained a dead letter for twenty years.

Fifteen years later Dr. Ryerson undertook to educate public opinion on the matter, and for a time the question became a live issue. In December, 1865, he issued a circular announcing his intention to make a tour of the country at an early date for the purpose of holding county school conventions. He stated that the object of each convention would be among other things; "To consider especially whether or not it would be desirable to have one board of school trustees for each township as there is one board of trustees for each city, town and incorporated village; and whether the township council should not be such board of school trustees, thus putting an end to my trouble, and disputes arising from school section divisions, and alterations, the election of section trustees, and the levying and collecting of school section rates, et cetera, greatly simplifying the machinery of the school system, leaving to parents, a larger discretion as to the selection of a school for their children and giving greater permanency to this situation of teachers. In several of the neighboring states where the system of township boards has been established the advantages are said to be immense. The township board would, of course, appoint for each school a visiting committee of three, who would visit the school from time to time, and report annually, or oftener, its state and progress to the board."

Forty conventions were held during the months of January, February and March, 1866. Dr. Ryerson was present at each and explained his proposals. The proposed change met with vigorous opposition. In letters written to T. George Hodgins during his tour he mentions a meeting at Coburg as "very large and thoroughly packed with delegates from meetings held at various places which were sent to oppose township boards;" and he speaks of a meeting at Kemptonville, "where there was a majority of two against me on township boards. Caucus meetings had been held, resolutions had been adopted and delegates had been appointed." Of the convention held at Picton he said: "The question of township boards was argued with much earnestness, but injudiciously, by the principal opponent. I was enabled to explain the whole question with clearness and force, and then turned the objections so as to enlist the sympathy and excite the ambition of the farmers, so that several of them publicly acknowledged that they were converted to my views, and a majority of the meeting actually voted down the proposed amendment, and supported my suggestion for township boards."

Of the forty county conventions twenty-five formally expressed a desire to adopt the principle of township boards; ten passed resolutions in opposition to the proposal; the remaining five either took no action or failed to report. The proposal to place the administration of the schools in the hands of the township council was not received with much favor.

While the net result of the campaign was a decisive victory for the Superintendent, the opposition he encountered left its impression on him. This is indicated in his annual report where he makes this reference to the recent county conventions: "It was exceedingly gratifying to witness the deep interest everywhere evinced for the advancement of universal education in the county, the strong attachment to the school system and the jealousy with which any proposal to interfere with it in the slightest degree was viewed."

Subsequently, Dr. Ryerson prepared a draft School Bill, which provided for local option in relation to township boards. In an explanatory memorandum he pointed out that it would greatly simplify the school law "and proportionally reduce litigation, while it would immensely contribute to improve the condition of the teachers, and the elevation and efficiency of the schools."

Owing to various causes his proposals were not at the time adopted by the Legislature. He continued his efforts and succeeded in having a section embodied in the Public School Act of 1871, which gave a township council power to establish a township school board in case two-thirds of the sections in the municipality voted in favor of it. But in the meantime public interest in the matter had died down, and this section of the Act remained a dead letter while it remained in force.

I am strongly of the opinion that had Dr. Ryerson met with early and complete success in his efforts to secure township boards, we would have had to-day much more efficient and satisfactory rural schools. The best

administrative unit for schools is the largest taxation unit. There should be one board of trustees for each township as there is now one board of trustees for each city, town and incorporated village. To change the administration of our rural schools to conform to this principle is, to my mind, the one reform which is at present most urgently needed to promote the cause of education in rural communities.

Lambton Co., Ont.

HENRY CONN.

### Farmers and the Eight-hour Day.

EDITOR "THE FARMER'S ADVOCATE":

We hear, from time to time, taunts thrown at (and about) the farmer for his practice of working fifteen and sixteen hours per day, and thereby driving his help away from him. As we look at this argument at first glance it would appear that this were true, but upon looking more thoroughly into the matter we are led to believe that there are two more important or more direct reasons why the help has left the farm, and one is free homesteads in the West. The better class of farm help have seen opportunities of starting on their own account at farming in the newer provinces, and who can blame them? Then very many who have not gone West have been enticed by the shorter day and glare of the city, for which no one should blame them, if they really studied the matter carefully before they made the change. There is no class of people who would welcome an eight-hour day more than the farmers, if their customers (who depend upon them to such an extent for their very existence) are willing to pay a living price to the farmer or whoever produces their food. We have reached the stage where it is necessary to look at this matter squarely, with the object of adjusting things, before starvation stares too many in the face. The unfortunate part of such a crisis is that the children suffer most. It has been reported through the public press about a well-known automobile manufacturer who is about to make the minimum daily wage \$8, and at the same time still further shorten the working day. Such a person will be lauded the world over as a philanthropist, when, in reality, such a move is directly detrimental to a lower cost of living, because the young men immediately leave off producing foodstuffs and hie to the factory to secure \$8 to \$12 per day manufacturing luxuries. If the farmer could speed up his workmen and in addition add to the price of his output, as the manufacturer can, and does, he could shorten the day and increase the pay and still declare very substantial dividends.

Will we ever have Governments big enough and independent enough to regulate those things? When we do, there won't be as much agitation about the tariff.

A few months ago the writer, in discussing the labor problem with a labor man, asked him how he would handle the labor problem on the farm. His answer was, he would run two shifts. We are sure that the farmer who now finds it impossible to get enough men for one shift will realize how ridiculous such an argument is, and even if such could be done, wouldn't or shouldn't the consumer pay more for this food, to meet the additional cost of production? Nothing would bring the extremist (for shorter day and more pay) to a thorough knowledge of the rocks and shoals they are drifting towards quicker than would the adoption of an eight-hour day on the farm, if it were possible. The one thing that has kept starvation from within our borders since 1914 is the fact that thousands have faithfully plodded along on the farms of Canada, fourteen and fifteen hours a day, with the object of keeping production up to normal, after they had toiled years enough to have a well-earned rest and were not obliged to toil any longer. As to the eight-hour day on the farm, it cannot be arranged, owing to the many changes of weather, etc. Indeed, it is a question if the average man engaged by the year on the farm, works more than eight hours per day, on an average. During the winter there is very little done on many farms besides the chores and attending the stock. In summer, while the day is, of necessity, much longer, there are many wet days and parts of days when very little work can be done. The old saying "Make hay while the sun shines," is certainly applicable to the farm. To be a successful farmer, in Eastern Canada especially, the caring for live stock must continue to be an important branch of farming, and this alone prevents the practical shortening of the day to less than twelve hours, unless, as has already been intimated, the consumers are willing to pay for the additional costs of production, as is being paid for each manufactured article that has been increased in price owing to the day being shortened. Farming or gardening cannot be successfully done in fixed hours. When the weather is favorable, the ground must be worked with a rush, and planted with a rush, and at harvest time and threshing time the same thing applies. The successful farmer is not his own boss; he regulates his work according to climatic conditions and hustles, many a day, hours longer than he wishes to. As to an eight-hour day for the unions, no doubt eight hours are plenty, and perhaps too many, for some lines of work, yet it would appear as very unwise for any Government to fix a standard day. Let employee and employer get together and fix the length of day according to the strenuousness of each particular occupation. It may be a long time before foodstuffs will be materially cheapened if shorter days, and more pay, are to rule in manufacturing circles.

Middlesex Co., Ont.

R. H. HARDING.

### Objections to Township School Boards.

EDITOR "THE FARMER'S ADVOCATE":

In the issue of January 15 is published a letter from Henry Conn, advocating, "Township Boards to Administer Rural Schools." That, I think, should be carefully considered before any township commits itself to such a system. There is a decided tendency to-day among certain classes to advocate centralization, and particularly so among public school inspectors, and unless a determined stand is taken by thoughtful and far-seeing people we will have a system, which, according to Mr. Conn, has already been discarded by two townships, thrust upon us.

Are your readers prepared to stand for a system that will call for say four or five men who in nine cases out of ten, are personally unknown to over 50 per cent. of the ratepayers, to practically all of the school children and the majority of the teachers, and who will claim a salary that will be an addition to the already high township rates, and who will in many cases try and make it a stepping stone to municipal and political honors?

Does Mr. Conn expect that a salaried employee will take as much interest in the welfare of children, whose names he does not even know, as a parent who has a child or children going to the school of which he is trustee. In the section in which I reside, S. S. No. 15, Toronto Township, if our secretary-treasurer were paid what any member of a township board would claim, he would have received many times what he has, but his interest in the school and the development of his own children have been his reward.

Another decided objection to a centralized system would be that teachers instead of trying to please the ratepayers of the section in which they were teaching, would only have to please the board, and this in many cases might be disastrous to the future of some of our coming citizens.

The motive behind many of the agitations for centralization is given in the second last paragraph of Mr. Conn's letter where he says "the board would have power, etc." Our boys went to Europe to fight against autocratic power and we in Canada must beware, for petty Kaisers are ready to spring up everywhere trying to force citizens to follow their whims.

Just a word about consolidated schools. As far as I can learn, all but two sections have withdrawn from the Guelph Consolidated School and if it has not been a success, favorably situated as it is, will others less favorably located be anything but a failure. We must not compare conditions in the Southern States, etc., with ours, as the snow in winter and mud, spring and fall, prevent us transporting children long distances except at prohibitive cost.

And now that this letter may not be considered wholly destructive criticism may I venture a suggestion: Change our school system so that children just escaped from high school are not put in charge of our rural schools. They might be usefully employed teaching junior classes in towns and cities probably, but train our teachers so that our rural pupils may remain in public school until say 16 or 17 years of age, instead of leaving at about 13 years to enter high school and be trained for urban but seldom for rural citizenship. If, as Premier Drury states, 93 per cent. of our pupils never enter high school, the solution of our rural school problem is in the extension of the curriculum to include children of more mature age.

Peel County, Ont.

LORNE DAVIDSON.

### CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

#### A College Course in Agriculture.

EDITOR "THE FARMER'S ADVOCATE":

Some time ago I wrote to you, and in my letter I stated that I felt that farmers should be better educated. I was at that time going to high school and my desire was to take a course at an agricultural college after completing high school. Sooner than I expected I found myself able to attend college, so I am writing this letter from the Nova Scotia College of Agriculture, at Truro. Before coming here I had only a slight idea of what was done and studied at an agricultural college, so it is to enlighten others who may possibly be in the same plight, that I am going to give, as clearly as I can, a short outline of the subjects that we study in the junior year and some of our college life.

Entomology is one of our chief studies and treats, in a broad sense, of insects—their structure, life habits and methods of control with injurious ones, or methods of multiplication with helpful kinds.

Horticulture, another interesting and beneficial study, treats of the growing of fruits and vegetables; the preparation of the soil, fertilization of the land, planting of the crop, care while growing and gathering, and caring and marketing of same.

Chemistry of plant and animal life gives the student a knowledge of a great many things which, until it is studied, is a mystery to him. It also gives the student an introduction to and helps him in almost every other phase in studying agriculture.

Another study, "agriculture," treats of the study of almost every phase of general agriculture. It gives the history, formation, composition and structure of soils, taking in geology, the study of the earth, the effects of winds, waters and all the rest of nature's agencies on the soil, rocks, etc., and treats of fertilizers. It gives

the use of and explains farm machinery, and last, but not least, gives the life history and use to man of the domestic animals.

Botany is studied, or rather tried to be studied. It treats of the structure and the method of growing of our native and common plants.

Animal husbandry, I think, almost explains itself from the title. The different domestic animals are studied. Dairying is taken up under a separate study. The composition, care and uses of milk are thoroughly discussed, and the feeding of dairy cattle is given a good raking over the coals.

Some of the other studies which are understood better by outsiders are: English, with special stress on composition; mechanical drawing, in order that the student may be able to draw and interpret plans; public speaking, to enable the student to speak with confidence and clearness in public and private meetings; mathematics, in which the student is given instruction in all problems of every-day occurrence, and a course in farm bookkeeping; veterinary science, in which the student learns to diagnose the most common disease and troubles in domestic animals and to treat same properly.

Then there are other side things given such as instructions in poultry and beekeeping, and help can be received for the asking on any subject the student may have interest in.

I am afraid that my readers will think we do nothing but study,—far from it! The College takes part in hockey, basket-ball, and other winter leagues. It has its own rink. Then we have our social evenings when the students invite their friends, and, too, the boys are invited to social functions in churches, Y. M. C. A., and other public institutions, so that summing it all up our College life is one of profit and pleasure. It broadens the student's mind and tries to fit him for one of Canada's young farmers and future leaders. I thank you for this space in your circle and for the patience you have taken to read my ramblings.

Truro, N. S. N. S. A. C. STUDENT (JUNIOR).

**AUTOMOBILES, FARM MACHINERY AND FARM MOTORS.**

**Where Tinkering is Injurious.**

Curiosity is so apt to get ahead of one many times, and when it manifests itself in the form of mere tinkering or meddling with mechanical devices it very often turns out bad. Not one of the least of such devices is the automobile, which comes in for its share of tinkering by various owners who think they really understand what they are doing or else are just simply making an investigation to see what will happen if they change things around a bit or experiment contrary to the way things were originally intended.

An illustration will prove just what one man found out in tinkering with his storage battery, when he thought it needed something and wasn't sure about it. He had the impression that the battery needed water, but without thinking just what the nature of the water should have been. And it appears that he didn't care very much, for he wished mostly to see how things were going to turn out by his new way of doing things. He bought some soda water and poured it into the cells. When the battery turned sick he ran to a battery doctor and was asked what he had been doing. He confessed and said he thought it needed something and that soda water in nice bottles seemed to be the real thing. That little tinkering cost him rather more than twelve dollars to have that battery overhauled and cleaned, but it taught him, as he acknowledged, a lesson.

The carburetor comes in for its share of meddling. Every time the motor misses fire it is laid at the door of the carburetor. The needle spray is adjusted and twisted until there is not the semblance of the device in action that the makers intended. No one realizes how much mischief a slight turn of the adjustments on carburetors will cause, especially when the device is not at fault and the trouble lies somewhere else. Unless it is proven beyond doubt that the carburetor is to blame never allow inexperienced hands to touch it, for even experienced hands will sometimes make a mistake about it. The rules of correct carburetor adjustment all lie in the relation of spark to mixture, the quality of the gasoline, the compression in the cylinders and some familiarity with the carburetor itself. Any one of these things will require, probably, some adjusting of the carburetor for the time being, but it is far better to correct those things that directly affect the carburetor because there will be no reliable action until it is done.

Some drivers get it into their heads that they cannot start out on a drive unless something is tightened up. With a long-handled wrench you can get tremendous leverage on a nut at such times, and even if a nut is turned up as far as possible, it may be next to impossible to back off and may twist the bolt in two. These phases of the question apply to housing bolts like those of the differential and drive shaft, and the studs on the cylinder head as well as other places. Of course it is a good thing to test such bolts frequently to see whether they are really loose or not, but if you do tighten them with a wrench turn them up only until there is firm resistance and no farther.

A delicate contrivance on cars is the automatic regulator and cut-out that is located in the charging line between battery and generator. This device operates by bringing its contact points together when the voltage of the generator reaches and slightly exceeds that of the battery, opening or separating when the

voltage drops due to a reduction of speed to prevent current flowing from battery to generator and discharging the former. Any one who has ever looked into one of these regulators must know that they are a delicate thing, and so the use of pliers on them by inexperienced hands is forbidden by persons who really understand them. Many an automatic cut-out has been hopelessly damaged by tinkering, even when that device was not to blame and the trouble lay in a bad terminal. Leave them alone, and if blame is to be attached to them for an inoperative system, get some one to adjust them who surely understands how or let them be taken off and either sent to the makers or have a new one installed.

**THE DAIRY.**

**The Dairy Situation.**

Recently at the convention of Eastern Ontario Dairymen, J. A. Ruddick presented an interesting review of the dairy situation. In our report of this convention last week we were unable to print it in full. The remainder of the paper however is given herewith and it deals with dairy production in 1919 as well as some international aspects of the dairy situation.

**PRODUCTION IN 1919.**

"The season of 1919 has established new records for Canadian dairying in several respects. We have increased our total production of milk, and prices have been higher than they have ever been before. In 1918 the average price paid for cheese by the Dairy Produce Commission was 23.35 cents f.o.b. steamer at Montreal. While similar statistics are not available for 1919, the average price will be somewhere in the neighborhood of 27½ cents per pound on the same basis. Record prices have also been paid for butter. The average price for all grades of creamery delivered at Montreal works out at a little over 53½ cents. The quantity of creamery butter produced was the largest of any year in the history of the industry. The output shows an increase in every Province except Manitoba, where the labor situation interfered with the shipping

facture of various products, will amount to very nearly \$250,000,000, of which about \$65,000,000 worth will be exported. These figures put dairying in the very forefront of Canadian industries.

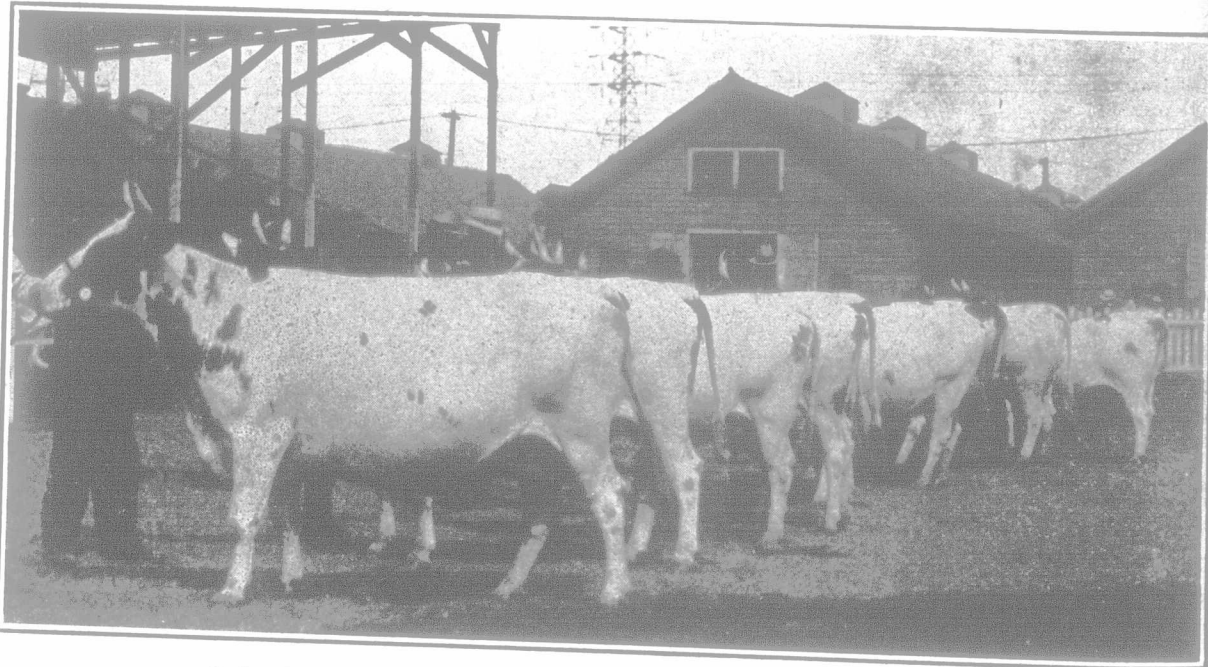
"The November 1919 issue of the Monthly Bulletin of the Dominion Bureau of Statistics gives the number of milch cows in each province for 1918 and 1919 as follows:

TABLE I.  
MILCH COWS IN CANADA.  
(Dominion Bureau of Statistics.)

Province	1918	1919	Increase	Decrease
P. E. I.	41,429	45,662	4,233	
N. S.	157,829	162,230	4,401	
N. B.	120,123	153,058	32,935	
Que.	1,163,865	1,056,347		107,518
Ont.	1,097,039	1,140,016	42,977	
Man.	225,659	227,872	2,213	
Sask.	352,989	374,062	21,073	
Alta.	328,702	336,596	7,894	
B. C.	50,965	51,594	629	
Totals	3,538,600	3,547,437		

Net increase in 1919..... 8,837  
Total increase milch cows, calves and other cattle 1914 to 1919..... 3,173,043

"It will be noticed that there is a net increase for the year, according to these statistics, of 8,837 cows, but the figures from the Province of Quebec are probably misleading. The provincial statistician explains that a new method of computing was adopted in 1919, which seems to indicate that the number of cows in Quebec in 1918 and previous years was exaggerated, so that the apparent decrease is not a real one. This is borne out by the fact that official returns show a decided increase in the quantity of milk received at the Quebec factories in 1919. Quebec is the last place in Canada where one would expect to find any decrease in the number of cows. It would seem, therefore, that the actual increase for Canada is much larger than these figures show. Then again, there is a constant improvement in the average yield of milk per cow in Canada. This amounts to a very large quantity every year.



Splendid Line-up of Mature Dry Ayrshire Cows at Toronto, 1919.

of cream and caused more butter to be made on farms. "Owing to the unusual channels through which a large proportion of our cheese has been handled, it has not yet been possible to secure exact figures of production or export for 1919. The receipts at Montreal were lower than in 1918, but a considerable quantity of cheese was exported to the United States through other ports, and the stocks on hand at country points are larger than they were at this time last year. Then again, the home consumption of cheese has, according to the best information obtainable, increased very considerably during the year. When the figures are complete I think it will be found that there was some decrease in the output of cheese, but this will be more than offset by the increase in the output of condensed milk and milk powder, for the manufacture of which milk supplies were largely drawn from the cheese factories.

"The growth of the condensed milk and milk powder industries during the war period has been the most notable feature of our dairy production. It is estimated that for 1919 the total quantity of condensed and evaporated milk will be very nearly 110,000,000 pounds, valued at approximately \$20,000,000. The total quantity of milk powder produced during the year amounts to 5,323,537 pounds, valued at \$1,662,352. There has also been a large increase in the manufacture of ice cream and in the consumption of milk in the towns and cities. There is even a large per capita increase in the consumption of these products. The fact is the public is gradually beginning to realize that milk and its products, even at the advanced prices, are among the cheapest foods on the market.

"The total value of the milk produced in Canada in 1919, whether consumed direct or used in the manu-

"There is an increase also in the number of calves but the same allowance must be made for the figures relating to Quebec as in the case of milch cows. All animals, male and female, under one year are recorded as calves. That explains why the number of calves compared with the number of cows is very much larger in the beef raising districts. In Alberta there are more calves than milch cows, for the reason that many range cows are not counted as milch cows.

TABLE II.  
CALVES IN CANADA.  
(Dominion Bureau of Statistics.)

Province	1918	1919	Increase	Decrease
P. E. I.	25,296	32,589	7,293	
N. S.	87,428	82,481		4,939
N. B.	67,298	83,857	16,559	
Que.	558,650	494,060		64,590
Ont.	691,441	688,850		2,591
Man.	172,171	207,577	35,406	
Sask.	332,040	364,336	32,296	
Alta.	397,670	428,888	31,218	
B. C.	48,132	41,591		6,542
Totals	2,380,126	2,424,229		

Net Increase..... 44,103

**NO CAUSE FOR PESSIMISM.**

"I call attention to these increases in production and the prospects for further extension of the dairy industry, as indicated by the number of milch cows and calves, to offset if possible the note of pessimism which seemed to prevail in some quarters during the past season.

amount to very nearly 5,000,000 worth will dairying in the very

the Monthly Bulletin statistics gives the number for 1918 and 1919 as

	In-crease	De-crease
1919	4,233	
	4,401	
	32,935	
		107,518
	42,977	
	2,213	
	21,073	
	7,894	
	629	

8,837  
3,173,043

is a net increase for statistics, of 8,837 cows, Quebec are probably a net increase in 1919, which is a net increase of cows in Quebec. This is borne out by a decided increase in the number of cows in Quebec. This amounts to a



number of calves made for the figures of milch cows. All the year are recorded number of calves is very much larger than there are more on that many range

A. (statistics.)

	In-crease	De-crease
1919	7,293	
	16,559	4,939
		64,590
		2,591
	35,406	
	32,296	
	31,218	
		6,512

44,103

ases in production of milch cows and of pessimism which the past season.

"It may be true that the profits from dairying are no larger at the present time than they were in pre-war days, but it is not true that the production of milk is decreasing on that account, and I cannot conceive of any surer way to discourage production than the re-iteration of the statement that the dairy industry is declining. We must not allow ourselves to be misled on this point, and jump at conclusions because the production or export of certain products shows variations. We export only about 25 per cent. of our total production, and it is the total production of milk which is the important thing. The manufacturer of butter, or cheese, or condensed milk, or any other product, is only a means to an end, that end being the best possible return for the milk produced. Where milk is diverted by higher prices from one branch of the industry to another it is a serious matter for those who have money invested in the business which is being deserted, but these things are bound to occur in the evolution of any business and cannot very well be avoided. You cannot prevent milk producers in this free country from taking advantage of the best available market. There is one thing you may be sure of, and it is this, that as long as there is a demand for all these different articles there is no danger of any one of them being produced to the total exclusion of the others. The law of supply and demand will regulate that.

HIGH PRICE OF MILK.

"A great deal has been said during recent months respecting the high price of milk and the effect of such prices on the welfare of the children of the country who may be deprived of milk on that account; but I question very much if the average man with the higher wages which are paid to-day, is not in as good a position to buy the same quantity of milk as he was before the war. The price of milk has not advanced as much as many other things, and milk is to-day one of the cheapest of foods. There are a great many well-intentioned but ill-informed people who discuss this milk question, and make misleading statements which tend to create a feeling of bitterness on the part of consumers towards those who produce the milk. Some people would stop the export of dairy products in order to bring down the price of milk. Such a proceeding would be in the line of economic suicide for Canada and very unfair to the dairy industry, as there is no reason why it should be singled out for such treatment. This country must live by the export of agricultural produce. We will have high prices as long as the present world's scarcity exists, and the scarcity will be relieved only as production overtakes consumption. High prices are necessary to stimulate production. Any action which would result in reducing prices would have the effect of decreasing production and, therefore, putting off the day when there will be a reasonable balance between supply and demand.

CONDITION OF DAIRYING IN EUROPE.

"It may be well at this point to have a look at the international dairy situation in order to see if the faith in the future being shown by Canadian dairymen as a whole in preparing for continued production is justified or not. You have heard it stated many times that there was a decrease in the number of cattle on the continent of Europe during the war period. Just what this decrease is I am unable to say. I have seen more or less conflicting figures, but all are agreed that there is a very large decrease, and under present conditions a renewal of the herds to the old time standard seems to be a very slow and difficult proceeding.

"The great shortage of concentrated feeding stuffs on which the European dairymen depend so largely is a very serious obstacle in the way of speedy recovery. Before the war the exports of butter from ten European countries amounted to 500,000,000 pounds per year, the bulk of which was taken by the United Kingdom. Of this quantity 200,000,000 pounds came from Denmark. For the 11 months ended November 1919, the total quantity of butter received in the United Kingdom from these same countries was only 26,369,280 pounds. Denmark has had some surplus during the last few months, but it is mostly going to Switzerland. Small quantities are being shipped from Denmark to Sweden and Norway, and also to the United Kingdom, but production in Denmark is very far short of what it formerly was. The herds have been reduced, there is great shortage of feeding stuffs, and the manufacture of oleomargarine is very limited owing to the difficulty of securing raw materials.

"Russia was formerly the next largest source of supply for dairy products for the United Kingdom, but this source has dried up entirely, and there is no telling when it may be revived. Italy, Switzerland, France, Holland, Sweden and Norway were all large exporters of dairy products down to 1914, but all these countries are now importers. The situation in the United Kingdom is still causing the authorities much concern, and it is feared that there will be an actual milk famine during the present winter. The butter ration in England which had been 1 1/2 ounces per week for some time, was recently cut down to 1 ounce per week, the lowest it has been since the war broke out.

"Perhaps we ought to take these facts into consideration before criticizing the policy of fixing prices, and the control of distribution which has been adopted in the Old Country. We should consider the peculiar and dangerous situation which existed during the war, and which still exists, before blaming the authorities in this matter. If the trade in dairy produce in the United Kingdom had been left uncontrolled, the limited supply would have given rise to much speculation, and retail prices would have been forced up to such a level as to be prohibitive for the working people, upon whom the

supplies of munitions and other war materials depended. At the present time it is the coal supply which is causing anxiety. The policy of control insures that every person, rich and poor alike, receives the same quantity, and while there is some grumbling, you can easily understand that those with limited means accept the situation much more cheerfully when they know that others able to pay any price are in exactly the same position as they are.

FORTUNATE POSITION OF CANADA.

"Canadian dairymen, while they have had their legitimate grievances and have suffered from a shortage of labor, have after all been in a very fortunate position compared with other overseas Dominions. The short ocean voyage has insured sufficient tonnage to carry all our products without delay. In this respect New Zealand and Australia were greatly handicapped. At one time there was a year's output of cheese stored in New Zealand. Their surplus cheese is contracted for at 21 1/2 cents and the butter at 38 cents until August 1920, and private shipment is not permitted. That is a real "fixed" price.

"In conclusion let me say that as I see it there is every reason to believe that the dairying industry will continue to be the most profitable branch of farming in Eastern Canada. It is necessary that it should be the most profitable if there is to be continued expansion. It is the most exacting line of farm work that can be engaged in in this country. The production of milk has features which involve more or less hardship in many cases. If it were not so the business would soon be overdone."

HORTICULTURE.

Ontario Vegetable Growers Convene at Ottawa.

The annual convention of the Ontario Vegetable Growers' Association took place this year in Ottawa, on Thursday, January 15. A matter of general interest was the report of the Vegetable Specialist, A. H. MacLennan, Department of Agriculture, Toronto. Mr. MacLennan's report dealt with the work done during the year on cabbage maggot, black heart in celery, celery blight, onion thrip, radish and onion maggot, aphid, green worm in cabbage fertilizers, cost of production and marketing. The speaker said that seventy-five per cent. of the cabbage crop was saved at Blenheim and Peterboro by treating the plants three times with corrosive sublimate, beginning four days after they were set out, at the rate of one ounce to ten gallons of water. At Leamington, ninety per cent. of the infected crop was saved. Tarnished plant bugs made black heart in celery a much more serious problem this year than before. The most successful treatments for serious attacks consisted of using one pint of Black Leaf 40 to four gallons of water, although the usual sprays for ordinary cases is one pint of Black Leaf 40 to fifty gallons of water, with two pounds of soap added as a sticker. Growers were strongly advised to remove weed patches near the celery bed, since these harbor the insects. Markedly good results were secured after using a dust made up of fifteen pounds of Bordeaux dust, fifty pounds of sulphur and thirty-five pounds of hydrated lime or talc for celery blight. Tests on a larger scale will be tried next year. The onion crop was cut down more than fifty per cent. by onion thrip this year. In many cases the injury was done before it was noticed, and sometimes from fifty to one hundred pounds of nitrate of soda per acre helped to bring the crop through. Professor L. Caesar, at Burlington, found that one part of Black Leaf 40 to five hundred parts of water, with three pounds of soap added, gave excellent results if put on with a fine nozzle held close to the plant. This should be repeated twice. Aphids were controlled by the use of one pint of Black Leaf 40 to ten gallons of water, with one-half pound of soap as a sticker. If thoroughly applied, one application is sufficient. For green worm in cabbage, one and a quarter ounces of fresh pyrethrum powder to a three-gallon knapsack sprayer will cover from 1,500 to 2,000 cabbages. One pound of Paris green to six gallons of middlings, mixed thoroughly and applied with a twirling motion of the thumb and first two fingers, can be used successfully after the heads have formed, on cabbage only. An acre a day can be done easily, and rain does not affect it.

FERTILIZERS AND MARKETING.

With regard to fertilizer experiments, Mr. MacLennan said that most growers who experimented last summer found that fertilizer was giving them results, notwithstanding the dry weather. Many requests have been made that the work be carried on further, since growers soon began to see that they could obtain valuable results with much less manure if the proper type of fertilizer is applied. The greatest mistake made was in the lack of cultivation, many growers thinking it unnecessary on account of the dry weather. The speaker emphasized the necessity of closer co-operation between the practical growers and the work that was being done on their behalf by the Provincial and Federal Governments. To bring about this necessary co-operation he asked that a committee of three or four be appointed from amongst those present with whom he would at any time be able to discuss the best means of tackling the many pressing questions that were now before them. Mr. MacLennan also emphasized the necessity of bringing more clearly before the public the work the vegetable growers were doing, and the prices they often obtained for their products as compared

with the prices paid by the consuming public. By this means, moreover, the consumer might be advised throughout the season of the crops then on the market and where to purchase to the best advantage. Such advice would benefit the growers by assisting in the disposal of their crops, and would tend to reduce the likelihood of periodic glut and shortages. It would bring about a stabilizing of prices; a benefit from which both the growers and the public would be the gainers.

F. G. Fuller, London, read an interesting paper dealing with the subject of "Combining Vegetable and Fruit Growing on Market Gardens." The speaker pointed out the necessity of taking into careful consideration the proximity and extent of one's market, the value of the land upon which one might be situated, and the labor available. J. J. Davis, London, emphasized the importance of location when deciding upon the most suitable crops to grow. Localities less than a mile apart often vary considerably in their susceptibility to late spring frosts. Under such circumstances a crop of strawberries might prove to be a highly profitable undertaking to one man, and equally unprofitable to a near neighbor.

REDUCING MARKETING EXPENSES.

F. C. Hart, Markets Branch, Toronto, dealt with the subject of Co-operative Marketing, pointing out the unorganized and expensive methods employed by vegetable growers generally in the disposal of their crops. It was evident from the discussion that followed that this problem had been carefully studied by many present. The speaker pointed out the services rendered by an expert salesman or middleman. The time spent by some fifty growers, each one of which spent a day or two a week in marketing his stuff, could be more profitably spent by employing the services of an expert salesman with necessary assistance, who would dispose of the products of all the fifty growers. Such a man would be in a position to know the requirements, not only of his own immediate market, but the requirements of other available markets within reach, and in this way dispose of large quantities of produce and maintain a relatively stable price. An instance was cited where through the lack of a co-operative system of marketing the price of a bag of potatoes varied as much as \$2.40, at two different points only forty miles apart. The reverse of such a condition of affairs was to be seen in the highly-developed organization for marketing wheat, where often only a fraction of a cent in variation of price was to be found in markets situated thousands of miles apart. This subject was keenly discussed by many present, and the benefits derived during the past season by the Erie Co-operative Association in marketing their crops in this manner were instanced. The expense of marketing was approximately 2.10 per cent., as compared with the estimate of 15 to 20 per cent. to the individual under the old method. It was decided to bring this matter to the attention of all the branches of the Association at as early a date as possible, and secure the assistance of Mr. Hart in organizing local co-operative associations.

Papers dealing with the question of small holdings for the returned soldier were given by F. F. Reeves, Humber Bay, and E. J. Atkins, Leamington. Both papers were ably presented, Mr. Reeves considering that insufficient interest had been shown in the advantages and possibilities of market gardening by those engaged in assisting returned soldiers to become established in agricultural work. The speaker pointed out the distinct advantages that life as a market gardener would have for many men unable to take up other lines of agriculture. A resolution was unanimously passed requesting the appointment to the Soldier Settlement Board at Toronto, immediately, of a man competent to advise and assist in the settling of soldiers on suitable small holdings of less than twenty-five acres in extent.

ABOUT SEED POTATOES.

"What we know about Seed Potatoes," was the subject of a paper by W. T. Macconn, Dominion Horticulturist, who pointed out that while every market gardener knows the importance of having good seed, not every grower knows how great a difference may be shown between the best and poorest seed. The speaker said that in 1909 he had said at the Ontario Growers' Convention that there was a marked difference in the yield of seed from different sources, and urged the vegetable growers to procure their seed from Northern Ontario. "This advice was followed with good results," said the speaker, "although difficulty was experienced in obtaining the regular supply. Since that time, however, the Provincial Government has done much to encourage the production of seed potatoes in Northern Ontario, until now there is a good supply of high-class seed. It is quite natural that one should ask why the seed potatoes from Northern Ontario or from New Brunswick are better, as a rule, than those from Southern Ontario, and in reply it may be said that it has not yet been clearly demonstrated how much is due to climate and maturity or immaturity of the tuber, and how much to disease. Just as good and even better results have been obtained in some instances at Ottawa from seed produced at Ottawa the previous year as from seed produced in Northern Ontario or New Brunswick. For example, in 1919 Green Mountain potato from seed grown at Ottawa in 1918 yielded at the rate of 330 bushels per acre, from New Brunswick 312 bushels per acre, and from Northern Ontario 299 bushels per acre. Other seed of Green Mountain potato produced at Ottawa in 1918 yielded only 46 bushels per acre. What caused the difference? In this particular case the Green Mountain which produced the high yield was grown by itself in 1918 in a place where potatoes had not been grown for at least thirty years. In the other

case the Green Mountain was grown among other varieties and stocks, most of which had yielded poorly. Now, in this case it would seem that a disease of some sort was responsible for this great difference in yield."

#### BETTER CROPS THROUGH HOME-GROWN SEED.

The securing of better crops through the use of home-grown seed was discussed by A. J. Logsdail, C.E.F., Ottawa. "It has been proven time and again," said the speaker, "that acclimatized seed is superior to seed that has been introduced from a country where the climatic conditions are very different. This very fact, however, has been the greatest handicap with which we have had to contend in the past. The great seed-growing areas of the world where the bulk of vegetable seed is produced, possess climatic conditions peculiarly adapted to the raising of enormous crops of seed and thoroughly maturing it at a minimum cost. The seed that comes from these countries is heavy, plump and attractive in appearance, and, judging by external appearances, is often superior to Canadian-grown seed. We should remember, however, that we are not buying seed for its appearance; we are buying it for what it contains, for what it will produce when that attractive or less attractive exterior has rotted away. The question arises, 'Can seed be grown successfully in Canada?' A full answer to this question would require much more time than is now available. It would necessitate a careful consideration of the different requirements and the climatic variations of half a continent, but briefly I would answer the question by stating that seed of first-class quality can be successfully grown and matured. The expense of growing this seed, however, would be considerably greater than is the case in countries where climatic conditions are more favorable. The yield of seed would probably be considerably less, the expense in maturing seed of certain crops would be heavier, and the risks of failure would be greater, but if one considers the enormous benefits that would be derived from carefully-bred and acclimatized seed, the extra expense incurred would be a very minor item to offset the added advantages gained. Further, such work would have an accumulating benefit, after a period of twenty or thirty years (and possibly at a much earlier date) we would possess varieties actually and not relatively Canadian."

Methods of improving vegetable crops were dealt with by O. J. Robb, Horticultural Experiment Station, Vineland Station, Ontario. The speaker outlined the different lines of work now being carried on at Vineland, and the methods employed to obtain the desired results. He pointed out the difficulty it would entail to many growers were they to undertake this work themselves. He also pointed out the necessity for Government assistance, and the services of men who could devote their whole time to this specialized line of work.

Work carried on in connection with the control of the cabbage root maggot was the subject of a paper by

Arthur Gibson, Entomological Branch, Ottawa. The method advocated was the use of corrosive sublimate applied in solution at the rate of one ounce to ten gallons of water. Experiments had been conducted with varying strengths of this solution, and with several applications. Three applications should be made; the first four or five days after planting, the second about ten days later, and the third about ten days after the second. The speaker thought that the cost of applying these applications would be somewhat more than \$1.25 per thousand plants. Several members present recommended this method very highly.

#### GROWERS SHOULD ALLOW FOR THEIR OWN LABOR.

Garden management was the subject of a practical address by W. J. Cooke, Cataraqui. Mr. Cooke gave figures to show the large proportion of one's total outlay that was absorbed by labor. In 1917 no less than \$4,163.00 was spent in labor out of a total expenditure of \$6,188.00. In 1918 the amount chargeable to labor amounted to \$5,156.00 from a total of \$8,363.00. The speaker claimed that too many men amongst the growers regarded themselves as their own best laborers, yet failed to credit themselves with a daily wage that they would have otherwise to pay to other labor if not done by themselves. Then again, many men spent too much time doing a laborer's work when they would have been money in pocket by spending more time and thought on the supervision and arrangement of the work in hand. The speaker emphasized the necessity for greater care in the putting up of one's product for market. The same principle that impels one to go to a well-arranged store where the goods are neatly and elegantly displayed when purchasing a suit of clothes is the same principle that impels the purchasers of vegetable products to go to the man whose stuff is most attractively put up. To run a business successfully it is equally necessary to see that one has the real interest and support of those working for him. This support can only be secured by taking a real and live interest in the welfare and comfort of one's help by supplying suitable housing accommodation and by assisting in many minor ways to make life worth living.

#### DISAPPROVE OF FREIGHT INCREASES.

A. H. Walker, Macdonald College, Quebec, read a paper that resulted in a discussion of considerable interest, on the subject of growing crops such as tomatoes, melons, cucumbers and lettuce under glass. Wm. Trick dealt in an interesting manner with the exhibition of vegetables, taking occasion to point out the opportunities that are often lost by a poor arrangement of the material available.

G. E. McIntosh, Fruit Branch, Ottawa, brought before the convention the action that had already been taken in the interests of the fruit organizations of the country in requesting fuller consideration by the railway commissioners of the recent application by the railways for an increase of from one to one and a half

cents in the charges for heated cars. The speaker pointed out that though some increase might be necessary to meet the increased cost of service, it was contended that the railway companies should be compelled to guarantee efficient service if any increase is made. The meeting endorsed all action that had been taken on their behalf, and expressed disapproval of the action of the transportation companies in their request for an increase in freight charges amounting to practically fifty per cent.

#### OFFICERS.

The officers elected for 1920 were the same as for last year, namely: President, W. E. Eborall, Beamsville; First Vice-President, M. May, Tecumseh; Second Vice-President, G. H. Poole, London; Secretary-Treasurer, J. Lockie Wilson, Toronto. The Executive consists of the officers given above, in addition to F. F. Reeves, Humber Bay. Messrs. Broughton, of Sarnia; McNaughton of Orangeville, and Fleming, of Blenheim, were appointed delegates from the Association to the conference to be held in Ottawa on February 26, to discuss the grades and standardization of potatoes and onions.

## FARM BULLETIN.

### Seats for Drury and Doherty.

It was officially announced last week that Premier E. C. Drury would seek election in Halton County, and Hon. Manning W. Doherty would make East Kent his home riding if the constituents so willed. Nominations are to take place on February 9 and elections, if such prove necessary, on February 16. At time of writing there has been no official mention of a seat for Hon. Mr. Raney, the remaining seatless member of the Government, and rumor has it that considerable difficulty is being experienced by the Committee in its search for a constituency for the Attorney-General.

Halton was opened for the Premier by the resignation of J. F. Ford, the U.F.O. member elect. The Liberals held a meeting last Saturday to consider a candidate, but the decision for the time being, at least, was unfavorable to this action. The Conservative Association were to hold a meeting on Tuesday, but as this is being written the outcome is not known. It is altogether probable, however, that the Premier will not be opposed unless it be by an independent candidate who would tend to combine the Liberal and Conservative opponents of the U. F. O.

East Kent was opened for the Minister of Agriculture through the resignation of J. B. Clark, and at present it appears that Hon. Mr. Doherty will not be troubled with a contest.

# Forty-first Meeting of the Experimental Union

The forty-first annual meeting of the Ontario Agricultural and Experimental Union, held at the Ontario Agricultural College, on Tuesday and Wednesday, January 20 and 21, was characterized by the usual attendance of short course and regular students, and the usual small number of ex-students. The program was more or less in line with former programs and carried out promptly. Hon. Nelson Monteith, President, occupied the chair and in his presidential address said: "There has been a notable falling off in the number of experimenters during the war, but evidence of a revival has been shown by the increased demand for material for experiments during the past autumn." After mentioning the somewhat decreased crop yields during the past year the president said: "the retaining of those on the land who are to the manor born is the surest hope of Ontario Agriculture. To this end improved environment, shorter hours of labor and better pay are necessary. The shortening of hours of labor in urban centres, the so-called 'daylight saving,' and price setting, are all factors tending to decrease agricultural production, which in turn will have a marked effect on the cost of living in the near future. This Experimental Union meeting is the one agricultural meeting which ex-students and students should not fail to attend. Here the ex-students, by co-mingling with the student-body, regains some of the enthusiasm of youth, while the students may from the ex-students learn some of the lessons gleaned only in the wide field of experience. Our alumni associations, good in their way to keep alive the fraternal feeling that should exist among the ex-students, do not touch the work of the President and staff of the college as does this Union, which, in a measure, annually reviews the work of the different departments of the college and thus keeps alive a more sympathetic interest in their work."

#### THE SECRETARY'S REPORT.

Prominent in the report of the Secretary, Dr. C. A. Zavitz, was the fact that the printed report of the last meeting made a volume of 72 pages. It was also noted that during 1919 co-operative experiments were conducted by the Experimental Union in the departments of Agricultural Botany, Agricultural Chemistry, Forestry, Beekeeping, Agriculture and Farm Literature. Further statistics showed that during the 34 years of co-operative experimental work, 94,703 distinct tests have been made throughout the Province, each of which consisted of

from three to ten plots; and that in 1919 co-operative experiments were conducted on 2,468 Ontario farms. A committee on farm literature was formed in 1919 for the first time and a questionnaire was drawn up "regarding debates and plays suitable for rural communities," and this was sent "to about 1,400 people throughout the province." It was not stated but we presume some of those receiving the questionnaire were farmers. An interesting statement regarding ex-students of the college reads as follows: "in 1919 an extensive survey was made to ascertain the present addresses and occupations of the ex-students of the regular course of the Ontario Agricultural College. In this study of the relationship of the ex-students to Agriculture it was found that 80 per cent. or four-fifths of all the ex-students of the regular course, 80 per cent. of the Diploma men, and 92 per cent. of the B. S. A. men were engaged in agricultural work. It was learned that 789 of the students and the ex-students of the regular course had enlisted in the recent war, that 230 became commissioned officers and that upwards of 50 received decorations for service in the field. No less than 107 O. A. C. men lost their lives in the war and in memory of these it is planned to erect a Memorial Hall on the College campus."

#### CO-OPERATIVE EXPERIMENTS.

The results of the co-operative experiments made in 1919 covered 30 typewritten pages and the most we can do here is to summarize very briefly. It was pointed out that the average rainfall for the six growing months of the past five years has been about 32 per cent. greater than that for the fifteen years previous and that in May, 1919, the rainfall was 5.76 inches; greater in fact, than during the same month for nineteen years previous. June and July were very dry, and below normal, showing only 1.43 and .74 inches respectively. "In a few instances," the report stated "the Experimental Union has had a marked influence in eradicating practically all of the many varieties grown with the exception of the ones which gave the most satisfactory results of those distributed for co-operative experiments. This is particularly true in the case of barley, spring wheat and rye. It is to be hoped that in a few years many of the varieties of oats and winter wheat will be eliminated and the more profitable kinds grown on practically all Ontario farms. It certainly does seem unfortunate that agents go through the country selling new and

untried varieties of grains and that farmers buy these seeds at comparatively high prices when they would usually get much better results by confining themselves to those kinds which have proven most suitable for Ontario." The accompanying table gives some condensed information regarding yields of tested varieties of different crops for varying periods of years:

#### OATS, BARLEY AND WHEAT.

With regard to oats the report said: "Only five years ago 68 per cent. of the oats grown in Ontario was of the Banner variety," but "during the last five years the O. A. C. No. 72 has increased very rapidly in general cultivation throughout the Province." The percentage of hull was given as: O. A. C. No. 72, 28 per cent., O. A. C. No. 3, 24 per cent., and Banner 30 per cent. O. A. C. No. 3 matures nine or ten days earlier than O. A. C. No. 72. Alaska is a very good early oat, and about equal to Daubeney. Appearances are against O. A. C. No. 3, but it is a good oat and brings the money. Emmer has been sent out for comparison with barley because it has been found a very close rival, not only in yield, but, according to United States experiments, in feeding value also. Barley for fall sowing is not yet recommended as it is not hardy enough, but where it will come through the winter it has given a little better yield than spring sown barley.

In spring wheat the acreage has increased from 100,000 to 350,000 acres due to the war and good prices. Marquis is a splendid variety for bread making and for export. Among winter wheats, Dawson's Golden Chaff is still one of the most popular varieties, possessing a stiff straw and heavy grain. It is, however, a pastry rather than a bread flour variety. O. A. C. No. 104 is a hybrid from a Dawson's x Bulgarian cross and out-yields both parents, being a little better in the grain than Dawson's, but not quite so stiff in the straw, although much stiffer than Bulgarian. It is also hardier than Dawson's. O. A. C. No. 61 spring rye is a selection from an imported winter rye from Germany and it is felt that this is the best variety for Ontario.

#### CORN, ROOTS, POTATOES AND MIXED GRAINS.

Among varieties of corn for husking, seven varieties have been experimented with for four years. Golden Glow, with an average of 65.4 bushels per acre for four years, was highest. This variety was highest in 1919, and highest three out of the four years. For total

Crop	Variety	No. Years Averaged	Total No. Tests	Yield in Bushels
Oats	O. A. C. No. 72	7	601	49.4
	O. A. C. No. 3			44.7
Barley and Emmer	O. A. C. No. 21	7	109	1,649 lbs.
	Common Emmer			1,368 lbs.
Hullless Barley	Guy Mayle	16	203	24.3
	Black Hullless			23.9
Spring Wheat	Wild Goose	7	119	20.5
	Marquis			19.6
Winter Wheat	O. A. C. No. 104	3	71	26.0
	Dawson's Golden Chaff			24.7
	Imperial Amber			24.6
	Yaroslaw			20.8
	Kharkov			20.7
Spring Rye	O. A. C. No. 61	9	37	24.5
	Common			21.6
Winter Rye and Winter Wheat	Petkus Winter Rye	4	21	1,920 lbs.
	Imperial Amber			1,525 lbs.
Buckwheat	Rye Buckwheat	10	36	27.9
	Silver Hull			20.3
Field Peas	Early Britain	4	183	23.2
	Potter			23.0
	Canadian Beauty			22.8
Field Beans	Pearce's Improved Tree	2		22.1
	American Wonder			15.3
	Elliott Pea			14.9
Soy Beans	Habara	2		14.7
	O. A. C. No. 81			11.9
Husking Corn	Brown	4	18	10.4
	Golden Glow			65.7
	White Cap Yellow Dent			63.6
	Wisconsin No. 7			59.5
	Bailey			57.6
	Comptons Early			54.4
	Longfellow			53.3
Salzer's North Dakota	50.4			

crop Wisconsin No. 7 was highest on the average, with 9.96 tons, while Golden Glow came second with 9.4 tons, but matures earlier. Best results from mangels are secured when they are sown on the level, especially, on light or loamy soil. The difference amounts to about 2/3 ton per acre. Where the soil is heavy, ridging may be better. Irish Cobbler, Green Mountain, Delaware and Rural New Yorker potatoes are the most extensively grown varieties, in the order named. Green Mountain, a late variety yielded 131 bushels per acre, while Irish Cobbler, an early variety, gave 122.7 bushels. Northern-grown seed of these two varieties, when yields for two years were averaged, gave 138.8 bushels per acre as compared with 126.2 bushels per acre from Southern-grown seed.

Regarding mixed grains the report stated that oats and barley when sown in the proportion of one bushel each by weight gave the best results of any combination tried. When combined, these two grains produced 205 pounds per acre more than either one sown separately. Mixed grains occupied the fourth largest acreage of any cereal crop in Ontario last year. O. A. C. No. 21 barley can be mixed with either one of the Alaska, Daubeney or O. A. C. No. 3 varieties, but it is not advisable to mix O. A. C. No. 21 barley with an ordinary oat like Banner, which is too late in ripening. Moreover, seed from the mixed crop should not be used in succeeding years because the proportion of barley tends to increase. One bushel of each pure grain should be used each year.

THE USE OF FERTILIZERS.

"Crops differ in their ability to get what they want out of the soil", said Professor R. Harcourt, in discussing the relation of fertilizers to farm practice. The speaker was unable to make any practical report upon co-operative fertilizer experiments during the past year because of seasonal and other difficulties with experiments undertaken. He did, however, discuss briefly the use of fertilizers and pointed out that the difference in various crops as mentioned above was noticeable in three ways: First by a difference in the range of the root system or a varying ability to search the soil for plant foods; second by a difference in the time of year that various crops make their most rapid growth; and third by the difference in characteristics of the plants themselves. As regards the second factor it was pointed out that early maturing crops for instance need an abundance of nitrogen for early growth, but that this is often necessary before the soil has warmed up sufficiently to make available the nitrogen stored in it. Naturally, therefore, such a condition can be practically remedied by timely applications of available nitrogen for the immediate use of the crop. It also happens, as regards the third difference, that certain crops require proportionately larger quantities of certain plant foods than others, but that they have more difficulty in extracting from the soil these elements than they do the ones required in smaller quantities. For this reason the application of easily available fertilizers has a distinctly practical advantage. Bearing on this general question also, is the fact that different kinds of soils vary in the quantities of total and available plant food per acre present so that the soil as well as the plant must

be studied. Professor Harcourt presented some figures to illustrate this fact, pointing out for instance that whereas a deep peat soil shows very large quantities of total nitrogen, the amount of potassium is comparatively small, especially if the amount of available potassium is considered. On the other hand yellow silt and black loams show much smaller amounts of nitrogen, but very much larger quantities of potassium. The speaker's figures also showed the vast difference between the total amount of plant food in the soil and the amount available, the latter frequently being almost negligible by comparison.

SUCCESSFULLY COMBATTING WEEDS.

Co-operative experiments for the eradication of some of the more noxious weeds have been undertaken under the direction of Professor J. E. Howitt, who reported to the meeting in a brief address, the results to date. This work has been going on for eight years now with some weeds and the following small table shows concisely the results to date.

Weed	No. expts.	No. successes	No. partially successful	No. failures
Perennial Sow				
Thistle (Rape)	12	9	2	1
Twitch (Rape)	14	11	3	0
Twitch (Cultivation)	9	3	5	1
Bladder				
Campion	9	5	4	0
Spraying for Mustard	23	20	2	1
Field Bindweed (Cult.)	3	1	1	1

Since the two most successful experiments so far concern the use of rape in the eradication of twitch grass and the spraying of cereal crops to destroy mustard, we are giving here with the methods followed: THE USE OF RAPE IN THE DESTRUCTION OF TWITCH GRASS.—Cultivate the field until about the middle of June, running over it frequently with the cultivator so as to keep the tops down and thus weaken the roots. Then apply the manure at the rate of about 20 tons per acre (12 good loads). Cultivate the manure in thoroughly, and with a double mould board plow slightly ridge up the land, making the ridges about 26 inches apart. On the ridges sow pasture rape at the rate of 1 1/2 lbs. per acre. It is important that the right amount of rape should be sown, for if too little is sown the stand will not be thick enough to smother the twitch grass, and, if on the other hand too much is sown, the plants will be too crowded and not grown vigorously enough to keep ahead of the weed. Sow the rape when the land is sufficiently moist to insure quick germination of the seed. If the rape is slow in starting, the twitch grass may get a start in the rows and thus necessitate hand cultivation there. Cultivate the rape every week or ten days until it occupies all the ground and makes further cultivation impossible. If, when the rape is

cut or pastured, any twitch grass remains, the field should be ridged up the last thing in the fall and put in with a hoed crop the following year. This should not be necessary if a good stand of rape is secured.

SPRAYING WITH IRON SULPHATE TO DESTROY MUSTARD.—Iron sulphate or copperas can be successfully used to destroy mustard in standing grain without injury to the crop. A 20% solution should be applied. This can be prepared by dissolving 80 lbs. of iron sulphate in 40 gallons of water. Iron sulphate is dissolved quite readily in cold water and the solution should be strained through a cheese cloth, as it is put into the spray pump tank. This will remove dirt and small particles that are apt to clog the nozzles. Apply on a calm, clear day just as soon as the first few plants in the fields show flowers. It is very important to spray early. If the plants are left too long the treatment is not nearly so effective and if a heavy rain comes within 24 hours after the solution is applied it will be necessary to spray again. An ordinary hand-pump barrel sprayer, such as is employed to spray fruit trees, may be used, or a potato sprayer can be rigged up to do the work. Many of the up-to-date potato sprayers have a special broadcast attachment for spraying weeds. These are excellent for large areas, as they cover a wide strip at each round. Care must be taken to see that every mustard plant is covered with the solution in the form of fine spray.

Professor Howitt also drew attention to the serious influence of the common barberry and its purple leaved variety in the spread of grain rust and asked for an expression of opinion as to whether the present Act, passed in 1912, to authorize its destruction, should be enforced. A resolution was later presented by Dr. R. E. Stone of the Botanical Department, O. A. C. and successfully passed, recommending certain amendments to, and the subsequent enforcement of the Act.

BEEKEEPING EXPERIMENTS.

F. E. Millen, Provincial Apiarist, reported upon co-operative experiments in beekeeping and said, in part: "During the winter of 1918 and 1919 an experiment was conducted to prove the value of raw sugar as a winter feed for bees. One hundred and eleven beekeepers reported the results. Owing to the fact that the winter of 1918-1919 was an exceptionally mild one the results were not serious. From some reports, however, it was seen that had that winter been severe, serious results would have resulted from the use of raw sugar as a winter feed. With a climate such as we have in Ontario, bees go into winter quarters, if wintered in the cellar, sometime in November and do not have a flight until removed from the cellar sometime during late March or early April. During the time the bees are in the winter quarters, they do not hibernate, but are constantly consuming small quantities of food. If the food is of good quality and does not contain impurities and other indigestible matters, practically all is digested and used to promote heat, through the muscular activity of the bee. Under such circumstances the indigestible matter is retained in the intestine until the bees get a chance to fly in the spring. When the food contains much impurity or indigestible matter, the intestines become overloaded, the bees become uneasy and a serious condition ensues, known to beekeepers as dysentery. Dysentery will often cause unseasonable brood rearing to commence and the bees use their vitality at an alarming rate and usually the colony dies or is so weakened that it is useless as a honey gatherer the next season. For these reasons beekeepers are careful to feed only pure granulated sugar or honey from a source which does not contain much indigestible matter. The feeding of raw sugar is unsafe in the average Ontario winter."

A RAID ON THE SCRUB BULL.

C. F. Bailey, Agricultural Commissioner, Toronto, outlined the plan by which Federal and Provincial Governments are co-operating to eliminate the scrub bull. Several methods had been suggested, said the speaker, including legislation, bonuses for pure-bred bulls and others, but the only way by which success can be permanently secured is through education. To this end a plan of campaign has been decided upon but as this plan has already been fully detailed in these columns recently we will not repeat it here. Following Mr. Bailey, Professor Wade Toole led in the discussion and pointed out by well chosen examples the practical folly of continuing the use of scrub sires. For example an 18-months-old pure-bred steer, weighing 1,265 pounds on the hoof was compared recently for short course students with a three-year-old steer by a scrub sire. The latter steer weighed 920 pounds on the hoof and sold for \$113 as compared with \$253 for the pure-bred one. The Dominion Experimental Farms have been grading up dairy herds now for some years, and it has been found so far that the first heifers by pure-bred sires and out of grade cows yield at two years as much as their dams did at maturity while at three years old they gave 33 per cent more than their dams at maturity. Several instances were noted of marked results from the use of pure-bred sires, and a letter from one of these men is quoted as follows:

"You recently asked me to give you my experience regarding the milking qualities of Scrubs vs. Grade cattle. About twenty-one or two years ago, I purchased a farm, and as mixed farming appealed to me to be the most profitable, I decided on that line and accordingly purchased at the auction sales and privately, nineteen head of what I know now to have been the scrubbiest of scrub cows. I hesitate to call them dairy cattle. I regret very much indeed now the fact that I kept no record of their performance. Be it sufficient to say, however, that the first year's operations quite

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MIXED GRAINS.

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convinced me that only a millionaire could afford to keep such a bunch, and I started the culling process. While there were no best ones, there were a lot of worst ones. These were disposed of for what I could get. The next spring I purchased a pure-bred Holstein-Friesian bull and have kept one ever since. As time slipped along, I found we were getting more milk from twelve half-breds than we were getting from the nineteen scrubs. After a few years of such decided improvement in our milk yield, and not withstanding the fact that we had now got into a herd of really high-grade cattle, we purchased a pure-bred Holstein cow with a calf by her side. This fall we will dispose of the half dozen grades we have left and our herd will consist of some twenty pure-breds. We were so well pleased with our original purchase of the cow and calf that we bought three others. We have, since starting pure-breds, sold enough of their offspring, to re-imburse us many times over for our initial investment. This summer we are milking ten head and notwithstanding the fact that four of them are heifers, we are getting more milk than we did from the original nineteen scrubs. While I am not prepared to say that the mere fact of a dairyman going into pure-breds, is in itself a guarantee of success, I know however, in most cases, it is an incentive to adopt better methods of caring for his herd. A dairyman starting to grade up or purchase pure-breds is sure to be a progressive man, and knows that in order to get the expected results, more than breeding is required. He gives his cows better attention, feeds better and builds a silo, and then feeds better balanced and cheaper rations, and the results are so encouraging that he gets so that he is always looking for improved methods of feeding and getting better sires, so that the process of evolution for a dairyman with scrub cattle to a dairyman with high-grade or pure-bred cattle, is not so expensive than any dairyman with scrub cattle need fear the expense or the result, once he makes his decision. I would like to add that with the present outlook for the dairyman, it is more necessary than ever to adopt better methods of feeding and breeding, in order to obtain a fair profit on the business; because nothing is more certain than that it is the producers in any herd of dairy cattle that show the real profit, and it is equally certain that in too many herds, there are individuals, that at the end of the season, if separate records were kept, would show a distinct loss."

WHAT THE FARM SURVEY REVEALED.

The financial condition of three types of farming in Ontario, namely, mixed farming in Dufferin and Peel Counties, beef raising in Middlesex, and dairying in Oxford were compared by Professor A. Leitch from the results of farm surveys made in these districts. It was pointed out by the speaker that these results cannot be considered final because of the limited amount of work done so far, but they do indicate fundamental differences between the three types of agriculture, that are not generally appreciated. The accompanying large table compares beef and dairying for 1918 and served as the basis of the speaker's remarks along with another similar table that space does not permit us to publish now, comparing dairying and mixed farming.

OXFORD AND MIDDLESEX 1918.

Tillable Acres	21 to 45										Over 225
	21 to 45	46 to 60	61 to 75	76 to 90	90 to 110	111 to 135	136 to 160	161 to 185	186 to 225		
Average Size	O 48	M 61	91	104	114	147	179	201	263		
Crop Acres	O 32	M 41	52	62	68	88	98	102	143		
Crop Acres Per Man	O 28	M 30	28	33	36	36	40	44	44		
Capital	O \$7,576	M 9,463	12,538	14,338	15,568	19,203	21,241	24,265	36,186		
Labor Income	O 735	M 936	868	1,158	1,327	1,440	1,881	2,159	2,449		

It can readily be seen with respect to dairying and beef-raising that the former, while carried on with smaller farms all through, necessitates greater acreages under crop in proportion to the size of farm. Similarly the acreage of crops grown with the labor of one man is greater in dairying than in beef-raising. Capital required is also somewhat greater, but the labor incomes show very marked differences that he who runs may read. A partial explanation of this is found in the smaller table accompanying, which clearly points out a decided influence, on the income of the farmer, of increasing the proportion of tillable acres in pasture, a use of land that is characteristic of beef raising.

ACTUAL TILLABLE AREA IN PASTURE.

Per Cent. Tillable Area in Pasture	Number Farms	Actual Size	Labor Income	100-Acre Farms	
				No. Farms	Labor Income
Under 20%	35	104	\$765	34	\$763
20-30	38	116	678	32	580
30-40	33	132	654	23	522
40-50	34	144	839	19	422
Over 50	32	167	600	14	175

With respect to dairying versus mixed farming figures so far compiled indicate that the dairyman is able to do a larger business on the same sized farm than can the mixed farmer. For the same acreage, however, more capital is required and less crops are grown per man, although on 100 acre farms \$400 more labor income was secured. From the figures presented it is suggested that for a man able to invest only a limited amount of capital—say \$7,000—a farmer is about as well off in one place as the other. Farms employing about \$9,000 capital show that except in very small farms, equal amounts of capital return practically equal profits from either type of farm. The dairy farmer with 61 to 75 acres of tillable land is at a disadvantage apparently, because of an inconvenient size of farm, it being too large for one man and too small for two. Further indications point to the conclusion that the 100-acre farm gives the dairyman all opportunity he needs. Brains and methods count for more than size of farm from here on as the following comparison of the best and average labor returns for each group of 100-acre farms (divided on the basis of the number of tillable acres) shows:

EXPANSION WITHOUT MORE LAND.

Group (Tillable Acres)	Total Farms		Best Farms	
	Number	Av. Labor Income	Number	Av. Labor Income
21-45	30	\$ 524	6	\$ 911
46-60	41	719	10	1,400
61-75	49	763	10	1,606
76-90		1,237	10	2,500

WHAT MAKES THE WORK DIFFICULT.

Following Professor Leitch's address, J. C. Neale, Farm Management Department began the discussion and we quote him as follows: "At the beginning of this work, and in fact right up to the present, the great difficulty has been in persuading the farmers of the surveyed areas of the legitimacy and need of such a work. In the first survey made—in Caledon Township, Peel County,—practically every third farm was a "turn-down." In subsequent surveys, the proportion of "turn-downs" has been smaller, but even last spring there were still many days when the fieldmen were pretty much disheartened—when they came in at night to report one record and six "turn-downs." "This skepticism on the part of so many farmers is perhaps due to the fact that they have not been able to see any benefits to themselves directly traceable to survey work. But since the conclusion of the field work of the last survey conducted, the results of survey work have been brought more or less into prominence. Last fall, when the Board of Commerce took a hand in the fixing of milk prices to the Toronto Milk & Cream Producers' Association, they summoned Mr. Leitch to give evidence on the cost of production of milk. The evidence given by Mr. Leitch was based absolutely on figures taken in surveys of dairy sections. It is not necessary to go into details of that here. Every man who reads the

much into detail. Detail is absolutely necessary to the working out of any results. One item of detail which has not been attempted as yet because of a fear of losing even more records, is the amount of food material which the farm supplies directly to the farmer's table. In our work so far we have taken absolutely no record of such items. But if such information could be obtained it would make even a stronger defence against the charges that farmers are becoming profiteers. Many city men are of the opinion that practically all of the farmers' living comes directly from the farm. Nothing can be said to the contrary because there are no figures available to back up such a statement. Too much detail in this work is an impossibility. And when it comes to cost accounting which it is anticipated will be commenced this spring, detail in everything is absolutely essential.

"There is some opposition also on the ground that the information taken as it now is, by a visit to each farm once a year is too liable to error to be of value. While it is the contention of those in charge of the work that the information is accurate, an attempt is to be made this next spring to overcome this criticism. The records of the past summer and present winter's business must be taken in the old way, but on the completion of each survey this spring, two men will be left in each area to visit each farm once a month and take note of business transactions and farm operations in the season that they occur."

PLANT BREEDING FOR IMPROVED HORTICULTURE.

"Plant Breeding from a Horticultural Standpoint" was the subject of a paper by Professor J. W. Crow, O. A. C. from which we quote the following paragraphs:

"It seems to me only logical that we should undertake, and at once, to apply in actual practice our newer knowledge of the principles of breeding. I would venture the statement that the value per acre of our fruit and vegetable crops can be increased easily by from 25 to 50 per cent. In some cases the improvement could be 500 or 1,000 per cent. We lose annually in Ontario 30 or 40 per cent. of our apple crop through infection with apple scab fungus. There would appear to be no good reason to doubt the possibility of eliminating this great loss by combining the resistance to this disease of Duchess, Ribston, Blenheim and Hibernial with the good qualities of Spy, McIntosh, etc.

"Among the several hundred varieties of fruit grown in this Province I can recall only one which is distinctly high-class in dessert quality, cooking quality and shipping quality. This remarkable variety is the Reine Claude plum, which in the minds of plant breeders stands as a model of what we ought to have in apples, pears, peaches, cherries, grapes, strawberries, raspberries, etc. It is in very truth a paragon of virtues in comparison with which the best of our commercial varieties exhibit most serious defects. In my opinion this situation demands attention and we shall be guilty of criminal negligence if we fail to apply to this problem the best intelligence we have.

"One of the greatest difficulties in connection with the originating of new varieties is the matter of getting them introduced. Mr. Macoun of the Central Experimental Farm, Ottawa, has new varieties of apples of undoubted value which have fruited at Ottawa in some cases as long as 25 years, but which are not listed by nurserymen or known among the growers. In my opinion New York State has adopted the best possible plan of introduction, which is briefly as follows. The growers of the State have organized an association known as the New York State Co-operative Fruit Testing Association, membership in which conveys simply the right to purchase trees and plants which are being introduced by the Association. The Experiment Station at Geneva turns over to the Association the exclusive right to propagate any new variety which may be deemed worthy of introduction. The association places buds, scions, cuttings or plants with nurserymen for increase at contract prices. When the stock is ready it is listed by the Association and offered for sale to the members at cost. Hansen of South Dakota operates a somewhat similar scheme most successfully through the State Horticultural Society, the basis of which as in the New York plan is that the members pay for what they get. Our plan is that the new fruits and improved varieties of vegetables which are being developed in the Department of Horticulture will be listed and sold, as it is the almost universal experience of experiment stations that the public places a higher value on material they pay for than on stock offered free of charge.

JOINT OWNERS OF FOREST LANDS.

An appeal for greater interest in reforestation problems was made by E. J. Zavitz, Provincial Forester, Toronto. The following remarks are quoted: "We have made a small beginning in tree planting but the great Province of Ontario has scarcely awakened to the real needs of a progressive forest policy. Ontario is still in the primitive stages of exploitation and is only beginning to feel the pinch of high wood prices and lack of supply. We have not yet begun to consider our forests as producing continuous wood crops. I present this problem to you because it is your problem. You are joint owners in at least fifty million acres of forest lands which can never come under the plow and can only be kept productive by the growing of forest crops. As joint owners in this property you are interested in seeing it managed so that it will yield a perpetual revenue to protect you from the burdens of direct taxation. At present our gross revenue is about one and a half million dollars from this property. I need only point to the forest revenues of some other countries to indicate the possibilities of future revenues to be expected from our permanent forest regions. Previous

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in reforestation pro- , Provincial Forester, ks are quoted: "We tree planting but the reely awakened to the st policy. Ontario is ploitation and is only a wood prices and lack egun to consider our ood crops. I present y your problem. You million acres of forest er the plow and can rowing of forest crops. you are interested in ill yield a perpetual e burdens of direct revenue is about one his property. I need f some other countries uture revenues to be est regions. Previous

to the war France had 2,700,000 acres of state forests producing an annual net revenue of about four and a half million dollars or about \$1.75 per acre. Saxony with 430,000 acres of state forests realized an annual net revenue of \$5.30 per acre. Throughout Western Europe this story can be repeated of state and municipal forests producing splendid returns.

"Southern Ontario has some three million acres of private woodlands and over three million areas of waste areas which can only be made productive by reforestation. This older portion of the province has about nine per cent. of indifferent woodland, with many townships having less than five per cent. of woodland. While only of relative importance it should be pointed out that none of the important countries of Europe are so low in percentage of woodlands. Italy has fifteen per cent., France had about eighteen per cent, and Western Europe may be said to have from fifteen to twenty per cent. of forest area. So far as the chief forest products such as building materials, railway ties and pulpwood supplies are concerned southern Ontario is absolutely dependent upon outside sources. The woodworking industries of southern Ontario are largely dependent upon supplies of the more valuable hardwoods from the United States. We are fortunate in still having supplies of softwoods in Northern Ontario. These supplies are becoming increasingly inaccessible and costly, so that it is a common sight to see Southern pine and British lumber successfully competing with our native pine for building purposes and construction. We are informed by the Forest Service of the United States that the virgin supply of Southern pine can only last about fifteen years, and it is certain that the United States will soon cease to export valuable hardwood in any quantity. The wood working industries of Ontario use approximately twenty million dollars worth of raw materials. It is urgent that we make sure of the future supply of wood for these industries."

#### PREMIER DRURY EXPLAINS FUNCTIONS OF O. A. C.

At a largely attended meeting held on Tuesday evening, Premier Drury, was the first speaker and was accorded a royal welcome by all present. The Premier recalled his old associations as a student of the O. A. C. 20 years ago and expressed his pleasure of again renewing acquaintances. He referred very sympathetically to the plan for a memorial hall to be erected in memory of students who sacrificed their lives in the war and intimated that the Government would consider very favorably assistance in carrying out the project.

His address dealt with the ideals of the O. A. C. as first conceived and he discussed the things which the College should strive to accomplish. Years ago, he said, the college was considered in the light of an experiment. A great many people thought the farmers did not need any assistance and it was very difficult to get a grant of even a few thousand dollars for agriculture. "The original idea of the College," said Mr. Drury, "was to develop an educated, trained, contented yeomanry on the farms of this country." "This is the proper idea," the speaker said. "The rural people of this country have a destiny to fulfil that can never be fulfilled by any other class of people in Ontario. What the rural people are, the rest will ultimately become and no greater calamity could befall this Province than that the standard of living among rural people should be low. The lure of the fields is strong for some, but the lure of the city is strong too, and from one condition or another, rural depopulation has been taking place to an alarming extent. Ultimately, of course, the land vacated will be taken up, but who will take it up? Let us hope no inferior race. We do not want either a large land-owning class or a permanent laboring class in Ontario. From these two evils may the good Lord and our common-sense deliver us. We must aim at a contented yeomanry rather than a peasantry. We must assimilate and Canadianize the foreign born who come to our shores and to do this we need several hundred thousand British families with British ideals on the farms of this country to carry on this work. To assist in securing this contented yeomanry is the primary function of the O. A. C. and in fulfilment of this function the College has already done some good work, but it can do better. There is only one person who will lead us ultimately to our ideal and that is the farmer himself. The most the experiment station can do is to answer questions that farmers are asking. If I might criticize somewhat I would say that there has been a tendency to get the answer after everybody else has found it out. We must be prepared to answer questions and have the answer ready when the proper time comes. The great function of the O. A. C. and any other agricultural institution in the country is to turn back students to the land. Those that go back should bring back such an idea of social service and citizenship as they could never acquire without the college experience. There is a tendency for the people of rural neighborhoods to consider that their own little horizon measures the boundary of the world. We need graduates of agricultural colleges back on the land more than we need those who have not got their degrees. If we are going to maintain our standard of intelligence and our standard of living we must turn back educated men to the farm. If we continually leave the uneducated people to the farms we must lower our standard of living and the inevitable result of this must be a peasantry, whereas we want a yeomanry."

Following the Prime Minister, Dr. Jas. W. Robertson, Ottawa, spoke at some length on general aspects of the world's food supply. His address was along the same lines as we have reported from both the Dairywomen's Associations of Eastern and Western Ontario, in recent

#### RURAL COMMUNITY BETTERMENT.

Wednesday morning was occupied by a discussion of rural community betterment, the discussion of which being led by Rev. Robert Segsworth, Cheltenham. Speaking of the necessity for a community spirit the speaker said: "Those whose visions are limited to themselves are doomed to defeat. We must not only develop a strong community, but a community life, a community spirit and a community consciousness that we have not yet secured. It matters not where society is, the greatest forces at work for social betterment are the home, the school and the church. Without the full use of these great forces no community can come to what it ought to be. As regards the home, the speaker thought home life could not be what it should unless it were based upon the fear of God. The school must not continue to lead children away from rural life and unless the church is worthy of the support of the community it has no right to ask for this support. Churches should not be supported simply for the sake of supporting them."

#### SUPPORT NECESSARY FOR RURAL BETTERMENT.

A paper was read by Geo. A. Putnam, Superintendent of Women's Institutes, Toronto, on the question of community betterment. Mr. Putnam outlined the practical work toward this end that has been attempted by the Department of Agriculture and particularly by the Women's Institute. This work includes medical inspection of schools, home nursing, sewing and domestic science courses as well as the organization of Junior Institutes for girls. We quote as follows from his address: "Rural Community Betterment is not to be accomplished by paid officials, although they may, and will, be a factor in attaining the desired results. If the best is to be realized in the rural districts in education, recreation, healthful social life, co-operation in buying and selling, etc., we must have the active support of all concerned,—government officials, workers who have had the necessary practical experience and training, local talent, and, most important of all, the co-operation of all classes in the community concerned."

"Education, especially for the residents of the rural districts, should mean much more than the reading of books and a storing the mind with facts and fancies. It means the practical application of the teachings of recognized authorities in foods and cooking; the training, care and feeding of children; house planning and construction, water supply and disposal of waste; clothing; health,—contagious diseases, suitable diets for the different ages, home nursing and first aid, proper exercise and fresh air, heating, lighting, sanitation, etc. In connection with these features, both the men and the women are directly concerned; but the mothers must be leaders in these matters more than heretofore, if we are to witness that progress which we all hope for. Education for the farmer and the farmers' son along those lines which can be applied to the practical every day operations on the farm are necessary to create that interest which makes farm life attractive and profitable."

"Recreation and Healthful Social Life are essential, not necessarily organized teams for baseball and other games, but provision for some relaxation and change from the everlasting grind, which will bring each individual into contact with the people of the community upon some other than business lines. Encourage the young people to have a certain amount of healthful, helpful relaxation and change through games and entertainment, varied with constructive study, discussion and debates. If the young people cannot be given something to see, something to do, and something to hear by way of entertainment and constructive instruction, they will go to the centres of population. How much more interesting it is to have a part in such activities, rather than to be simply an observer and listener of what other people plan and say."

#### THE WILL TO DO TEAMWORK.

Miss M. U. Watson, Principal of Macdonald Institute, Guelph, followed Mr. Putnam and thought that teamwork in rural communities was as necessary as in games of sport. Rural people should develop "the will to do," or the spirit of getting together in order to work out their own problems. The substance of her address is well epitomized by the following quotation, with which she prefaced her remarks: "Learning to do; doing to earn; earning to live; and living to serve." Dr. J. W. Robertson followed with a stirring appeal for ideals of united common service, instancing the united purpose of the Belgian people as compared with our own lack of it by saying, "Belgium is not an aggregation of people living in an area—we are."

#### A SUITABLE RURAL PLAY.

At the evening session on Wednesday, Professor O. J. Stevenson reviewed the subject of debates and plays for rural people. He deplored the lack of suitable plays with a rural setting, and when he had finished speaking a play entitled "The Brown Mouse," was put on by local talent. This had been dramatized by local talent also from a book of the same name, and was a very excellent demonstration of what could be accomplished.

#### FINANCIAL STATEMENT.

Receipts during the year amounted to \$5,268.19 including a balance on hand from 1918 of \$2,323.48, a Government grant of \$2,750 and membership fees from 270 members amounting to \$135. Expenditures for experimental work were as follows: Field crops, \$2,956.17, agricultural chemistry \$45.20, agricultural botany \$39.75, farm literature \$137.68, agriculture \$1.11. There remains a balance on hand of \$1,632.83.

#### OFFICERS.

The following are the officers for 1920: President,

H. K. Revell, Goderich; Vice-President, J. B. Spencer, Ottawa; Secretary, Dr. C. A. Zavitz, O. A. C.; Assistant Secretary, Professor W. J. Squirrell, O. A. C.; Treasurer, A. W. Mason, O. A. C. Directors: Dr. G. C. Creelman, O. A. C.; Hon. H. C. Nixon, St. George; C. M. Laidlaw, Burwash; J. W. Widdifield, M.P.P., Uxbridge; and Dan McArthur, Appin.

#### Ottawa Valley Holstein Club Banquet.

On Thursday evening, January 15, the Ottawa Valley Holstein Club and A. E. Hulet, of Norwich, the owner of the champion cow at the Ottawa Winter Fair, tendered the breeders of the district a banquet in the New Russell Hotel. The arrangements for the banquet were looked after by W. R. Cummings, Secretary of the Club. It was a particularly well-arranged banquet, and everyone present apparently enjoyed themselves. After doing justice to the substantial menu, a toast list of some thirteen numbers were given. Harold Fisher, the Mayor of Ottawa, and Magistrate John Asquith, responded to the toast to the city. Neil Sangster, President of the Canadian Holstein Breeders' Association, replied to the toast to the parent and sister associations. The speaker of the evening was Dr. J. G. Rutherford, who gave a very interesting address. A. E. Hulet, replying to the toast to the champion cow, intimated that he had attended nineteen dairy tests but this was the first time he had secured a championship, although his animals had come in second in a number of instances. A pleasing feature of the evening was the presenting of a silver cup to Mr. Hulet by the Ottawa Valley Club. The presentation was made on behalf of the Club by George B. Rothwell, who, in handing it to the recipient, said, "this cup is something by which to remember us and your victory." A number of old-time songs were heartily sung by those present.

The banquet was also the annual meeting of the Club, and the report which the Secretary, W. R. Cumming, presented was one which was pleasing to each member. The officers elected for the ensuing year were as follows: President, A. C. Hardy; First Vice-President, T. A. Spratt; Second Vice-President, J. B. Wiley; Directors: Geo. McCullough, T. B. Charleson, F. W. Ball, X. Plant, J. S. Haddey, R. Dowler, H. Caldwell, Jas. Knapp and John Willoway.

#### Wentworth Milk Producers Meet.

A very excellent banquet was held in the Royal Connaught Hotel, Hamilton, on Thursday, January 22, by the Wentworth County Milk Producers' Association. This Association annually gathers together in the city of Hamilton in order to review the season's work and afford the members an opportunity of meeting each other socially. The ladies are always present, and this year helped to swell the crowd to between two and three hundred. The speakers were E. H. Stonehouse, Weston, President of the National Dairy Council, and two of the Ontario Cabinet Ministers, the Honorable F. C. Biggs and the Honorable Peter Smith. The latter was substituting for the Honorable Manning Doherty, Minister of Agriculture, who was to have been the principal speaker of the day, but who could not be present on account of illness. The gathering was presided over by J. P. Griffin, the President, who is also the Secretary of the Ontario Milk and Cream Producers' Association. Neither of the Cabinet Ministers made speeches of any considerable importance, Mr. Smith having only received very short notice of the meeting, and Mr. Biggs having arranged to speak fully as to the good-roads policy of the Provincial Government before the farmers' section of the Hamilton Board of Trade, on Saturday, January 31. Three or four hours were spent altogether enjoying a good banquet and listening to the various addresses delivered. Among those who spoke, in addition to those mentioned, were: The President of the Board of Trade; T. J. Mahoney, President of the Agricultural Section of the Board of Trade; J. I. Flatt; and the President, J. P. Griffin.

#### Western Ontario Winter Fair Association.

On Saturday, January 24, a Western Ontario Winter Fair Association was organized at a meeting held in Chatham. Definite action was decided upon at the recent Corn Show, although a winter fair for the Western part of Ontario has been discussed for some years. The financial question appears to be the main difficulty, but it is expected that the various county councils will be approached this week by a committee consisting of Cecil Stobbs, Kingsville; C. Pullin, Raleigh; J. O. Duke, Harrow; J. A. King, Wardsville; H. Stokes, Chatham; W. A. Galbraith, Iona; G. Bennett, Chatham Township; L. Gregory, Kent Bridge; Barandon Bros., Forest; H. Jenner, Harwich; Walter Anderson, Amherstburg; L. McFarlane, Essex; A. McKenny, Walkerville. Another meeting is to be held on Wednesday, January 28. The president of the newly-formed association is J. O. Duke, Harrow, and P. L. Fancher, Corn Specialist, is secretary. The provisional directors are as follows: H. F. Scott, Jas. Chinnick, L. G. Gregory, P. L. Fancher, R. W. Knister, H. F. Mansell, Cecil Stobbs, G. Bennett, J. O. Duke, L. McFarlane, C. Pullin, H. Jenner, C. Austen and H. Stokes. A site committee of six members, with Charles Austen as chairman, has been appointed.

# Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending January 22.

Dominion Department of Agriculture, Live Stock Branch, Markets Intelligence Division

	CATTLE						CALVES					
	Receipts		Top Price Good Steers (1,000-1,200)				Receipts		Top Priced Good Calves			
	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Week Ending	
Toronto (U. S. Y.)	6,772	8,560	7,126	14.50	14.25	13.75	728	650	704	24.00	18.00	22.00
Montreal (Pt. St. Chas.)	807	1,445	953	14.25	14.50	14.00	162	316	302	17.50	16.00	17.00
Montreal (East End)	1,249	1,573	1,181	14.25	14.50	14.00	185	146	398	17.50	16.00	17.00
Winnipeg	3,099	3,581	3,262	12.75	14.00	12.50	135	50	118	13.00	10.50	13.00
Calgary	2,424	3,215	3,015	12.00	14.00	11.60	141	—	148	9.25	—	9.25
Edmonton	303	966	250	11.50	12.50	10.25	59	128	5	9.00	—	9.00

	HOGS						SHEEP					
	Receipts		Top Price Selects				Receipts		Top Price Good Lambs			
	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Week Ending	
Toronto (U. S. Y.)	5,472	7,729	6,813	18.50	17.00	18.25	1,922	3,033	3,096	20.50	15.25	20.50
Montreal (Pt. St. Chas.)	390	1,071	1,395	19.25	17.25	18.75	526	829	2,035	17.00	15.00	17.00
Montreal (East End)	475	824	1,243	19.25	17.25	18.75	510	1,340	1,212	17.00	15.00	17.00
Winnipeg	5,998	6,407	7,252	17.25	15.75	17.00	437	243	578	14.50	15.75	14.50
Calgary	922	1,916	1,440	17.25	14.25	17.00	1,105	377	1,251	14.50	12.50	—
Edmonton	556	482	791	17.25	14.25	17.00	153	378	189	—	—	—

### Market Comments.

#### Toronto (Union Stock Yards.)

Owing to freight tie-ups on a number of branch lines of the railroads, following the recent heavy snow-fall, receipts during the early part of the week were comparatively light, and as abattoir buyers were keen bidders on all grades of butcher cattle, handy-weight steers and heifers being in very strong favor, showed considerable appreciation in value. On Wednesday and Thursday under heavier receipts trading became less brisk and the higher values prevailing on the earlier markets were barely maintained. Receipts for the week totalled less than 6,500 head. Local packers and butchers handled most of the offering as very few shipments are now going across the border, Buffalo quotations being less favorable to the producer than those at Toronto. The quality of the stock was on the whole fairly good, but quite a proportion of the cattle marketed would have been benefited by another thirty to sixty days feeding. A few heavy cattle were on sale and a number of these were bought for export to Europe. Seven steers averaging thirteen hundred and twenty pounds topped the market at \$15.25, a load averaging twelve hundred pounds sold at \$15 per hundred, and several sales were made from \$14.25 to \$15. Choice cattle of lighter weights showed the greatest appreciation in values, and this class was 25 cents to 50 cents stronger on the Monday market, one load of choice butchers selling at \$14.50 per hundred, six head averaging ten hundred and twenty pounds at \$14.25, thirty-three head of about equal weight at \$14, with most of the good steers and heifers ranging in weight from nine hundred to eleven hundred pounds selling from \$12.50 to \$13.75 per hundred, those of medium quality from \$11 to \$12, and common from \$7 to \$10. Cows and bulls met with a steady demand all week, and choice quality was quotable at \$12 per hundred, several transactions being made at this figure. Good cows moved from \$10.50 to \$11.50, and common from \$7 to \$9. Cannery and cutters were unchanged from \$5.50 to \$6.50 per hundred. The stocker and feeder trade was quiet and only a limited number of shipments were made to country points. Prices were unchanged. Veal calves were in extra good demand, and a few choice veal calves sold as high as \$24 per hundred, most of the good calves from \$19 to \$22, medium from \$15 to \$17.50, and common from \$10 to \$14. Two or three carload of calves were railed for Buffalo during the week.

Sheep and lamb receipts were comparatively light and the trade became weaker during the course of the week. A few lambs sold on Monday from \$20 to \$20.25 per hundred, but for the balance of the week \$19.50 was the top price paid. Sheep showed a similar decline, and on the Thursday market had a very slow trade, with best ewes selling from \$10 to \$12.50 per hundred, a decline of 50 cents to \$1 per hundred.

Hog receipts have been very light for this season of the year, and the market has shown a stronger tendency, values being marked up 50 cents to 75 cents during the week. On Monday hogs sold

CLASSIFICATION	No.	TORONTO		MONTREAL (Pt. St. Charles)	
		Avg. Price	Price Range Bulk Sales	Avg. Price	Price Range Bulk Sales
STEERS					
heavy finished	12	\$14.50	\$13.50-\$15.00	\$15.25	
STEERS good	198	13.51	12.50-14.25	14.50	40
1,000-1,200 common	23	9.78	10.25-11.50	0.50	
STEERS good	2,036	12.99	12.25-13.75	14.00	113
700-1,000 common	554	10.12	8.00-11.50	12.00	135
HEIFERS good	1,631	12.91	12.25-13.50	14.25	7
fair	158	10.92	9.50-11.50	11.50	40
common	73	8.10	7.00-10.00	10.00	79
COWS good	199	10.82	10.25-11.50	12.00	36
common	696	8.40	7.75-10.00	11.00	130
BULLS good	80	10.76	10.25-11.50	12.00	14
common	57	8.70	8.00-10.00	10.50	78
CANNERS & CUTTERS	262	6.00	5.50-6.50	6.50	79
OXEN	3				17
CALVES veal	711	17.19	15.00-21.00	24.00	72
grass	17	7.59	6.00-10.00	10.00	90
STOCKERS good	567	10.19	9.00-10.50	10.50	
fair	119	8.95	8.00-9.50	10.00	
FEEDERS good	104	11.50	11.00-12.00	12.00	
fair					
HOGS (fed and watered) selects	4,952	18.17	17.75-18.50	18.50	269
heavies	1	17.50		17.50	9
lights	418	16.09	15.75-16.50	16.50	103
sows	94	14.00	12.75-15.50	15.50	7
stags	7	11.25		12.25	2
LAMBS good	1,251	18.61	17.50-19.50	20.50	73
common	151	16.00	15.00-17.00	17.50	256
SHEEP heavy					
light	439	11.87	11.00-13.00	14.00	29
common	81	7.00	6.00-8.00	8.50	168

from \$17.75 to \$18 per hundred, while on Thursday \$18.25 to \$18.50 was the range quoted, the majority moving at the latter figure.

The total receipts from January 1 to January 15, inclusive, were: 12,593 cattle, 1,511 calves, 16,506 hogs and 6,210 sheep; compared with 13,840 cattle, 1,386 calves, 20,137 hogs and 11,394 sheep, received during the corresponding period of 1919.

#### Montreal.

There was a larger percentage of good cattle for sale than during the previous week and prices were stronger. One load of steers averaging twelve hundred and seventy-five pounds was sold at \$14.25 per hundred, a couple of loads of lighter weights brought \$14, and a number of very fair cattle changed hands at prices ranging from \$13 to \$13.50. Ten loads of cattle were received from the Winnipeg yards during the week, and these were sold from \$13 on a fed and watered basis to \$15, off car weights. There was a noticeable advance in prices paid for medium quality steers; on Wednesday six steers averaging eight hundred and forty-six pounds and in just fair flesh sold for \$12.50. Heifers were in nearly all cases weighed up with steers or cows of equal value and brought

prices up to \$12.50. Good cows and bulls sold up to \$11.50. Good-weight strippers in fair condition were sold from \$8.75 to \$9.25. Cannery and cutters changed hands from \$5.25 to \$6.50 and common light bulls around \$8. The price of veal calves is being affected by the number of condemnations on account of age. In some cases the loss from this source amounts to fully 25 per cent. of the lot. Veal calves of dairy breeding sold generally from \$16 to \$17, and in a few instances at \$17.50.

Lambs sold generally at \$16.50, and sheep at \$10 per hundred.

Hogs remained around \$19 off cars, prices fluctuating according to the number offered. There is very little attention paid to grading, except in the case of sows and light feeders. The price is the same for select as for light killers. One really choice small lot of selects were sold for \$19.50, sows are selling \$4 less than selects.

PT. ST. CHARLES.—Of the disposition from the Yards for the week ending January 15, Canadian packing houses and local butchers purchased 302 calves, 149 bulls, 580 butcher cattle, 1,395 hogs and 1,938 lambs. Canadian shipments were made up of 2 milch cows and 97 lambs. There were no shipments made to United States points during the week.

The total receipts from January 1 to January 15, inclusive, were: 1,455 cattle, 551 calves, 2,826 hogs and 3,194 sheep; compared with 2,423 cattle, 437 calves, 3,362 hogs and 3,034 sheep, received during the corresponding period of 1919.

EAST END.—Of the disposition from the Yards for the week ending January 15, Canadian packing houses and local butchers purchased 245 calves, 1,161 butcher cattle, 1,243 hogs and 630 lambs. Shipments to United States points consisted of 153 calves and 582 lambs.

The total receipts from January 1 to January 15, inclusive, were: 2,068 cattle, 600 calves, 2,056 hogs, and 1,931 sheep; compared with 2,881 cattle, 355 calves, 2,135 hogs and 2,389 sheep, received during the corresponding period of 1919.

#### Victory Bonds.

Following were the values of Victory Bonds on the Toronto market, Saturday, January 24: Victory Bonds maturing 1922, 100; Victory Bonds maturing 1923, 100; Victory Bonds maturing 1927, 101 1/2; Victory Bonds maturing 1933, 102 1/4; Victory Bonds maturing 1937, 104 1/4.

Continued on page 174.



Markets

of Agriculture, Live Intelligence Division

Good Calves	Same	Week
1919	Ending	Jan. 15
\$18.00	\$22.00	
16.00	17.00	
16.00	17.00	
10.50	13.00	
	9.25	
	9.00	

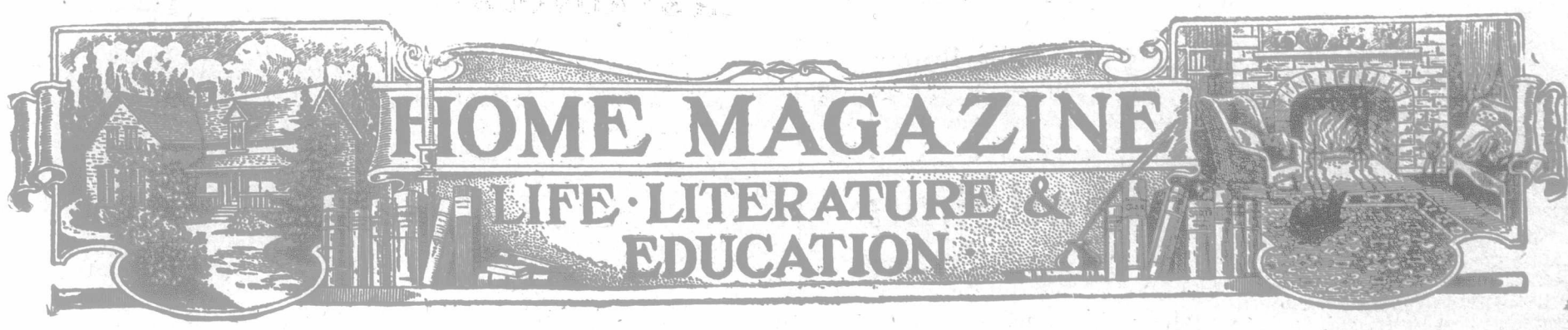
Good Lambs	Same	Week
1919	Ending	Jan. 15
\$15.25	\$20.50	
15.00	17.00	
15.00	17.00	
15.75	14.50	
12.50		

Range Sales	Top Price
\$14.25	\$14.25

13.50	13.50
12.00	12.00
12.50	12.50
10.50	10.50
9.00	9.00
11.50	11.50
9.50	9.75
11.50	11.50
8.50	9.50
6.50	6.50
17.00	17.50
	8.00
	19.25
	18.75
	14.75
	17.00
	16.00
	10.00
	9.50

From January 1 to were: 1,455 cattle, and 3,194 sheep; cattle, 437 calves, 4 sheep, received ending period of disposition from the ending January 15, houses and local 245 calves, 1,161 hogs and 630 lambs. States points and 582 lambs. from January 1 usive, were: 2,068 56 hogs, and 1,931 with 2,881 cattle, and 2,389 sheep, corresponding period

Bonds. values of Victory market, Saturday, Bonds maturing nds maturing 1923, turing 1927, 101 1/2, ring 1933, 102 1/4; ng 1937, 104 1/4.



The Pioneers.

BY H. M., IN THE "SPECTATOR," LONDON.

A quiet look they wear  
But O! their eyes are bright,  
For what they dream they dare,  
And dreams are heart's delight.

They neither tire nor chafe,  
Whatever chance may fall,  
The brave are always safe,  
And not to fear is all.

Childlike in speech and thought,  
Godlike in strength of will,  
What none before has wrought  
They glory to fulfil.

Therefore their eyes are bright,  
A quiet look they wear,  
They dream of heart's delight,  
And what they dream they dare.

Vitamines.

BY "MEDICUS."

IF we lived on the same food day after day, we all would soon be "under the weather;" at first not ill enough to go to bed, but just grouchy, easily worried, easily tired. Our aches and pains would be blamed on a "touch of rheumatism." (There is no such disease as chronic rheumatism. It's something else.) If we are among the upper tens we don't have rheumatism; it is too ordinary. We are suffering from neuritis. (neuralgia is a bit old-fashioned) or neurasthenia or a nervous breakdown. And what is the treatment?—"The rest cure." (Imagine a farmer's wife taking the rest cure! The rest could take it but she hasn't time). You are put to bed for 6 weeks and stuffed, just like the milk-fed crated chickens. Your diet consists largely of milk, eggs, bread and butter. —A diet rich in vitamins of sufficient calories to add several pounds to your weight.

Vitamines are so named because they are indispensable to maintain health and growth. They are found in all raw vegetables and fruits, milk and butter. If an animal, for example a pigeon, is fed exclusively on polished rice (the vitamins are in the hulls) it will soon develop "rheumatism," get stiff in the joints, and become paralyzed—a condition called poly-neuritis. The disease is rapidly cured by adding anything to the diet that contains vitamins. The hulls of the rice or of wheat (bran) not only cures but will prevent the disease. An analogous disease—Beri-beri—is common among the coolies of China and India, caused by a diet largely of polished rice.

A patriotic farmer, whom the writer knows, followed the advice of our Government a year or so ago—"Raise more hogs." He soon had too many to allow to run in the fields, and he shut them up in a pen and fed them grain. They soon developed "rheumatism"—just as the pigeon and the Chinese coolies do when placed on a diet deficient in vitamins. This farmer should have known more about vitamins and the chemistry of foods. Then he would have known that when he shut the hogs up where they could not get grass, weeds and roots, it was necessary to feed them "green stuff"—rape, turnips, etc.; rape, by the way, is especially rich in vitamins. Of course, dampness and poor ventilation in the pens in which animals are confined, greatly increase the probability that rheumatism will make an appearance; but the kind of food is very important.

Have you ever wondered why the babe would eat a raw potato? You have noticed that he will eat the butter and leave the bread. Why? His body needs the vitamins in the raw potato and in the butter, and instinct creates an appetite for them. So give him plenty of both every day if you want to prevent rickets or scurvy.

During the war we were advised to consider food values in relationship to the cost of foods. It was proven that we should eat the old-fashioned oatmeal rather than the widely-advertised breakfast foods, because we got more heat-units (calories) for our money. (Oatmeal, by the way, is not "heating" and should be used in the summer as well as in the winter.) The cost of lettuce, celery, cucumbers, strawberries, melons, apples, etc., is out of all proportion to their food value. In other words, these foods consist largely of water, and so cannot supply much heat. They are luxuries and not essentials if judged by this standard. But we need them in our diet. Why? They contain those mysterious substances called vitamins, as well as inorganic salts. Your husband may get an attack of "Spring Fever." The Spies and Greenings are finished by February, and his diet is becoming more and more deficient in raw fruits and vegetables. Have you noticed how much happier he is (he can even whistle) after "the pit is opened"? Apples never tasted better—because they supply us with something that we need, something that we are craving for.

Now, how does the Cook (capital C) regulate her menu to supply a sufficient amount of vitamins? Her fort is salads, which may consist of endless combinations of anything green and raw: lettuce, tomatoes, apples, radishes, cucumbers, oranges, watercress, etc. Another valuable source of vitamins is milk and butter, and she uses these in every meal she prepares.

Summary.

1. Vitamines are absolutely essential for health and growth.
2. They are found in raw fruits and vegetables, in milk and butter. Cabbage and turnips are especially rich in vitamins also liver and heart, but beefsteak is quite deficient.
3. They are destroyed by prolonged heating and drying.
4. Milk and butter supply the most essential of the different vitamins; so drink more milk, raise more cows.
5. Salads are a very agreeable way to administer vitamins.
6. Avoid a nervous breakdown by a

diet rich in vitamins and of sufficient food value to maintain your normal weight; and secondly, become interested in natural things—flowers and chickens best of all.

Among the Books

"Winter Studies and Summer Rambles."

BY MRS. JAMESON.

(Continued.)

AS an example of Mrs. Jameson's philosophy on various matters, may we quote the following:

"In what regards government and politics, do we not find the interest of the many sacrificed to the few; while, in all that regards society, the morals and the happiness of individuals are sacrificed to the many? And both are wrong. I never can bring myself to admire a social system in which the honor, rights, or happiness of any individual, though the meanest, is made to yield to a supposed future or general good. It is a wicked calculation, and it will be found as inexpedient as it is wicked."—We have moved on in many ways since these words were written, nearly 84 years ago; yet in view of the recent war and many other things that might be named, it must be admitted that the world has not got as far away from her accusation as might have been expected in so long a period of time.

In regard to Love—that god whose concern occupies so much of the attention of a portion of the human race, she says: "As light was the eldest-born principle of the universe, so love was the eldest-born passion of humanity, though people quote Milton to prove that vanity was so—in our own sex at least; and many are the witty sayings on this favorite text; but they are wrong, and their text misinterpreted. Eve, when she looked in passionate delight on her own lovely face reflected in the stream, knew not it was her own, and had nothing else to love; the moment she found an Adam on whom

to lavish the awakened sympathies, she turned from the shadow to the reality, even though 'less winning soft, less amiably fair,' she did not sit upon the bank and pine to death for her own fair face,

'Like that too-beauteous boy,  
That lost himself by loving of himself.'

—While the voice of love wooed her in vain. Vanity in this instance was but the shadow of love.—But, O me! how many women since the days of Echo and Narcissus have pined themselves into air for the love of men who were in love only with themselves!"

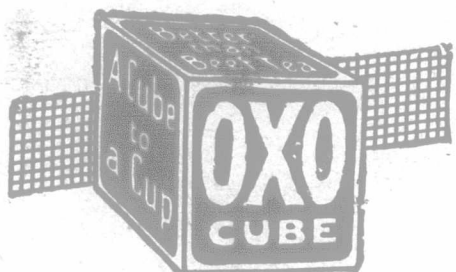
At a later date, when journeying on a boat en route from Detroit to the Sault, she was told by a popular clergyman, also on board, that two-thirds of the misery which came under his notice was due to the infelicity of the conjugal relations—infelicity and unfit— and she observes that the same thing had been brought before her in many other countries.

"Strange, and passing strange," she reflects, "that the relation between the two sexes, the passion of love, in short, should not be taken into deeper consideration by our teachers and our legislators. People educate and legislate as if there was no such thing in the world. . . . Must love be always discussed in blank verse, as if it were a thing to be played in tragedies or sung in songs—a subject for pretty poems and novels, and had nothing to do with the prosaic current of our every-day existence? . . . Must love be ever treated with profaneness, as a mere illusion? or with coarseness, as a mere impulse? or with fear, as a mere disease? or with shame, as a mere weakness? or with levity, as a mere accident? Whereas, it is a great mystery and a great necessity, lying at the foundation of human existence, morality and happiness; mysterious, universal, inevitable as death. Why then should love be treated less seriously than death? It is as serious a thing. Love and Death, the alpha and omega of human life, the two points on which God's universe turns; which He, our



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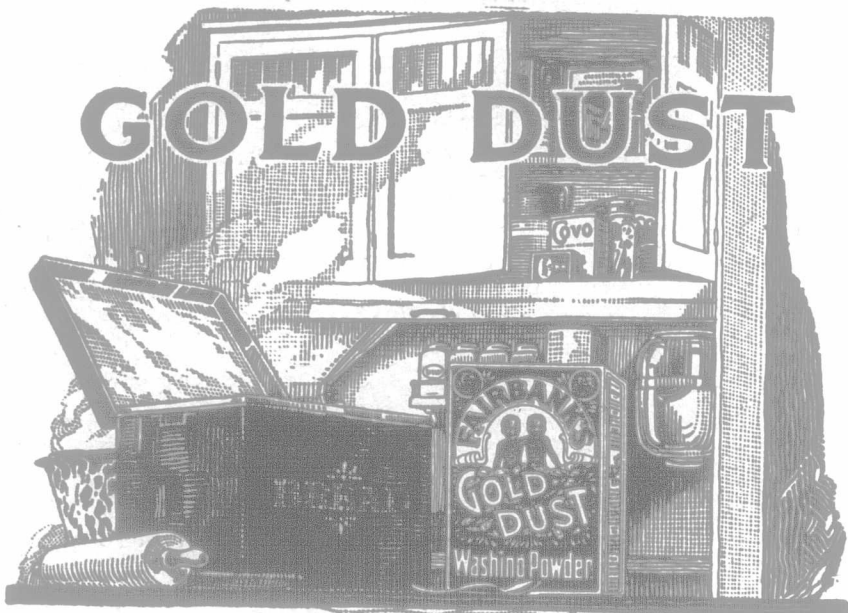
The concentrated goodness and nourishment of the choicest beef. The handiest Beef-food ever invented.

Tins: 10c, 25c, \$1.15, \$2.25.

**Color Sells Butter**  
Add a rich "June shade" to the splendid taste of your butter and get top prices. Try it! It pays!

**Dandelion BRAND Butter Color**

gives that even, golden shade everybody wants. Purely vegetable. Harmless. Meets all laws. Small bottle costs few cents at any store. Enough to color 500 lbs.



**How to keep Bread Fresher**

**YOUR** bread can't keep "fresh"—even for a day—in a stale bread box.

A tablespoonful of Gold Dust to a gallon of hot water takes wonderful care of Bread Boxes because Gold Dust dissolves every particle of grease in nooks and crannies. Now, scald with hot water and air thoroughly.

With this simple Gold Dust recipe you never need worry about stale or "mouldy" bread boxes.

Busy housekeepers know there is only one Gold Dust. They always look for the Gold Dust Twins on the package.

THE FAIRBANK COMPANY LIMITED, MONTREAL

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Infantile Paralysis caused the deformity. Two years after treatment at the McLain Sanitarium his mother writes:

"When we took our boy to the McLain Sanitarium he had to crawl on his hands and knees; after six months' treatment (Summer of 1917) he could walk alone. It is now two years since he took the McLain's treatment, and he has continued to improve every day since he came home."

Mrs. C. D. Speidel, Hanoverton, Ohio.

**For Crippled Children.**

The McLain Sanitarium is a thoroughly-equipped private Institution devoted exclusively to the treatment of Cleft Feet, Infantile Paralysis, Spinal Disease and Deformities, Hip Disease, Wry Neck, etc., especially as found in children and young adults. Our book, "Deformities and Paralysis," also "Book of References," free. Write for them.

**McLain Orthopedic Sanitarium**

949B Aubert Avenue

St. Louis, Mo.



Father and Creator, has placed beyond our arbitration—beyond the reach of that free will which He has left us in other things.

"Death must come, and Love must come—but the state in which they find us?—whether blinded, astonished, and frightened, and ignorant, or, like reasonable creatures, guarded, prepared and fit to manage our own feelings?—this, I suppose, depends on ourselves; and for want of self-management and self-knowledge, look at the evils that ensue!—hasty, improvident, unsuitable marriages; repining, diseased, or vicious celibacy; irretrievable infamy; careless insanity;—the death that comes early, and the love that comes late, reversing the primal laws of our nature."



**A Rhodes Scholar.**

Marcus D. C. Tait, of University College, Toronto, who has been selected as Rhodes scholar. Mr. Tait is a son of Rev. Donald Tait, of Fort Dalhousie. The Rhodes Scholarship, founded by Cecil Rhodes, provides that a course at Oxford (Cecil Rhodes own college) be accorded to such young men from the colonies as may be chosen for combined scholarship, popularity, prowess in athletics, and general manliness.

In 1837, in Toronto, reflecting on the subject of "Duty" she wrote, "Duty is the upholding law through which the weakest become strong, without which all strength is as unstable as water."

And at Detroit in the following summer, she had this to say of "Manners": "Nations differ in their idea of good manners as they do on the subject of beauty—a far less conventional thing. But there exists luckily a standard for each, in reference to which we cannot err, and to which the progress of civilization will, it is to be hoped, bring us all nearer and nearer still. For the type of perfection in physical beauty we go to Greece, and for that of politeness we go to the gospel. As it is written in a charming little book I have just bought here,—"He who should embody and manifest the virtues taught in Christ's Sermon on the Mount, would, though he had never seen a drawing-room, nor even heard of the artificial usages of society, commend himself to all nations, the most refined as well as the most simple."

Let us close this list of quotations with one more: "Great and worthy of all gratitude and fame were those men who have devoted their best faculties, poured out their best blood for the cause of freedom, for the land they called their own, the principles they espoused; but greater far and more worthy of gratitude, and of purer and more enduring fame, the very few who lived not for an age, a country, but for all ages—for all mankind; who did not live to preach up this or that theory, to sustain this or that truth, but who lived to work out the intellectual and spiritual good, and promote the progress of the whole human race—to kindle within the individual mind the light which is true freedom, or leads to it. Such was the example left by Jesus Christ—such a man was Shakespeare—such a man was Goethe."

So much for Mrs. Jameson's philosophies. Now let us turn again to the "travels" recorded by this thoughtful and cultured woman.

Before leaving Niagara she was much shocked to find that there was a maniac

at the jail there who had been chained up for four years. At the same time, in Toronto jail, were four insane persons kept in cells.—This is here interpolated as an interesting item which shows how greatly, in this respect, Canada has gone forward since her day in humanity and knowledge of mental derangement.

At the end of the week she was once more in her "new" house in Toronto, to which she had removed, well pleased, we may judge, to exchange the sight of the "miserable shanty and half-starved cow" for a broad view which embraced "the King's wharf, the light-house, and the lake on towards the south," the situation evidently being somewhere near the present Exhibition Grounds.

Reluctantly, for want of space, must be passed over the long winter of fruitful study that followed, with her comments on the course of reading she had set for herself; and so we arrive at the spring-time of 1837, by which time she was beginning to know the people better, and even to conceive a sort of affection for her home in the strange new land.

Particularly was she enamoured of the "Northern Lights," and her description is very beautiful: "The Aurora Borealis (March 29th, 1837) is of almost nightly occurrence, but this evening it has been more than usually resplendent; radiating up from the north and spreading to the east and west in form like a fan, the lower point of a pale white, then yellow, amber, orange, successively, and the extremities of a glowing crimson, intense, yet most delicate, like the heart of an unblown rose. It shifted its form and hue at every moment, flashing and waving like a banner in the breeze; and through this portentous veil, transparent as light itself, the stars shone out with a calm and steady brightness; and I thought, as I looked upon them, of a character we both know, where, like those fair stars, the intellectual powers shine serenely bright through a veil of passions, fancies and caprices. It is most awfully beautiful! I have been standing at my window watching its evolutions, till it is no longer night but morning."

On the first of April she wrote, "This is the worst season in Canada. The roads are breaking up, and nearly impassable; lands are flooded, and in low situations there is much sickness, particularly ague. We have still 16 square miles of ice in the bay." The table, however, was "pretty well supplied." She speaks of beef, "tolerable, but lean;" pork, "excellent and delicate, being fattened principally on Indian corn;" fish of many kinds, caught in holes in the ice and brought down by the Indians; venison and wild fowl—partridge and wild goose. "As yet," however, she had, "seen no vegetables whatever but potatoes."

"On the 15th of April the first steamboat of the season entered the harbor. They called me to the window to see it, as, with flags and streamers flying, and amid the cheers of the people, it swept majestically into the bay." Time went on and before the next month she had begun to call the lake "my" lake—"for I begin to be in love with it and look on it as mine." That night there was a ball at the government-house to which people came from as far as 200 miles away. "There were very pretty girls," she notes, "and very nice dancing."

**Erindale.**

The first event of outstanding interest, however, was a little trip to Erindale, the first stage of which was to the mouth of the Credit River, a trip of an hour and a half, by the steamer "Britannia." "The River Credit," she notes, "is so-called because in ancient times (i.e., 40 or 50 years ago) the fur traders met the Indians on its banks and delivered to them a credit—the goods for which, the following year, they received the value, rather ten times the value, in skins." "I have been assured by those long engaged in the trade, both in the upper and lower province," she continues, "that for an Indian to break his engagements is a thing unheard of; and if, by personal accident, he should be prevented from bringing in the stipulated number of beaver skins, his relatives and friends consider their honor implicated, and make up the quantity for him." But the fur trade, she notes, "has long ceased upon these shores."

At that time there was an Indian village near the mouth of the river. Now let the narrative continue: "After passing the Indian village, we plunged again into the depth of the green

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forests, through a road or path which  
presented, every now and then, ruts and  
abysses of mud, into which we sank nearly  
up to the axletree. . . . On each side  
of this forest path the eye sought in vain  
to penetrate the labyrinth of foliage, and  
intermingled flowers of every dye, where  
life in myriad forms was creeping, hum-  
ming, rustling in the air or on the earth,  
on which the morning dew still glittered  
under the thick shades.

"From these woods we emerged, after  
5 or 6 miles of travelling, and arrived at  
Springfield, a little village we had passed  
through in the depth of winter—how dif-  
ferent its appearance now!—and diverging  
from the road, a beautiful path along the  
high banks above the River Credit,  
brought us to Erindale, for so Mr. M—  
in fond recollection of his native country,  
has named his romantic residence.

"Mr. M— is the clergyman and  
magistrate of the district, besides being  
the principal farmer and land proprietor.  
His wife, sprung from a noble and his-  
torical race, blended much sweetness and  
frank-heartedness with more of courtesy  
and manner than I had expected to find.  
My reception was most cordial, though  
the whole house was in unusual bustle,  
for it was the 4th of June, parade day,  
when the district militia were to be turned  
out; and two of the young men of the  
family were buckling on swords and  
accoutrements, and furbishing up helmets,  
while the sister was officiating with a  
sister's pride at the military toilette,  
tying on sashes and arranging epaulettes;  
and certainly, when they appeared—one  
in the pretty green costume of a rifleman,  
the other all covered with embroidery  
as a captain of lancers—I thought I had  
seldom seen two finer looking men. After  
taking coffee and refreshments, we drove  
down to the scene of action.

"On a rising ground above the river  
which ran gurgling and sparkling through  
the green ravine beneath, the motley  
troops, about three or four hundred men,  
were marshalled—no, not marshalled, but  
scattered in a far more picturesque fashion  
hither and thither; a few log houses and  
a saw-mill on the river-bank, and a little  
wooden church crowning the opposite  
height, formed the chief features of the  
scene. The boundless forest spread all  
around us. A few men, well mounted,  
and dressed as lancers, in uniforms which  
were, however, anything but uniform,  
flourished backwards on the green sword,  
to the manifest peril of the spectators;  
themselves and their horses equally wild,  
disorderly, spirited, undisciplined; but  
this was perfection compared with the  
infantry. Here there was no uniformity  
attempted of dress, of appearance, of  
movement; a few had coats, others  
jackets; a greater number had neither coats  
nor jackets, but appeared in their shirt-  
sleeves, white or checked, or clean or  
dirty, in edifying variety! Some wore  
hats, others caps, others their own shaggy  
heads of hair. Some had firelocks; some  
had old swords, suspended in belts, or  
stuck in their waist-bands, but the greater  
number shouldered sticks or umbrellas.  
Mrs. M— told us that on a former  
parade day she had heard the word of  
command given thus—'Gentlemen with  
the umbrellas, take ground to the right!  
Gentlemen with the walking-sticks, take  
ground to the left!' Now they ran after  
each other, elbowed and kicked each  
other, straddled, stooped, chattered; and  
if the commanding officer turned his back  
for a moment, very coolly sat down on  
the bank to rest. Not to laugh was im-  
possible, and defied all power of face.  
Charles M. made himself hoarse with  
shouting orders which no one obeyed,  
except, perhaps, two or three men in the  
front; and James, with his horsemen,  
flourished their lances, and galloped, and  
capered, and curveted to admiration.  
James is the popular storekeeper and  
post-master of the village, and when, after  
the show, we went into his warehouse to  
rest, I was not a little amused to see our  
captain of lancers come in, and, taking  
off his plumed helmet, jump over the  
counter to serve one customer to a  
'pennyworth of tobacco,' and another to  
a 'yard of check.' . . . We returned  
to sit down to a plain, plenteous, and  
excellent dinner; everything on the table,  
the wine excepted, was the produce of  
their own farm. Our wine, water and  
butter were iced, and everything was the  
best of its kind.

"The parade day ended in a drunken  
bout and a riot, in which, as I was after-  
wards informed, the colonel had been  
knocked down, and one or two serious,  
and even fatal accidents had occurred;  
but it was all taken so very lightly, so



### Mother Meant What She Said

"What do you think of my  
bread, Mother?"

"Why, these loaves look per-  
fectly lovely. Since you have  
a home of your own you have  
become a wonderful cook. I'm  
getting envious, Edna. Why, I  
believe I like your bread and

biscuits better than my own!"

"Mother, you old flatterer!"

"No! I mean it. I've really  
never eaten better bread than  
yours."

"Well now, I refuse to take  
all the credit. I'll let you in on  
the secret, Mother. I use

## Cream of the West Flour

the hard wheat flour that is guaranteed for bread.

Maple Leaf Milling Co., Limited

Toronto. - - Canada

10

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Bonds such as those of  
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Paper Companies of the  
better class and in Pub-  
lic Utility Bonds such  
as those of the Ottawa  
Gas Company.

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the Savings Bank earn-  
ing only 3% interest,  
you can place it in a  
number of Corporation  
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where it will be quite  
safe and earn as high as  
7%.

Write and we will send you a  
list of such securities to in-  
vest in. Address:

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CORPORATION  
73 LIMITED  
MONTREAL**

Toronto    Halifax    St. John, N.B.  
Winnipeg    London, Eng.

very much as a matter of course, in this  
half-civilized community, that I soon  
ceased to think about the matter.

"The next morning I looked out from  
my window upon a scene of wild yet  
tranquil loveliness. The house is built  
on the edge of a steep bank (what in  
Scotland they term a *scour*), perhaps a  
hundred feet high, and descending pre-  
cipitously to the rapid river. The banks  
on either side were clothed with over-  
hanging woods of the sumach, maple,  
tamarack, birch, in all the rich yet  
delicate array of the fresh, opening year.  
Beyond, as usual, lay the dark pine-  
forest; and near to the house there were  
several groups of lofty pines, the original  
giant-brood of the soil; beyond these  
again lay the 'clearing.' The sky was  
without a cloud, and the heat intense. I  
found breakfast laid in the verandah:  
excellent tea and coffee, rich cream,  
delicious hot cakes, new-laid eggs—a  
banquet for a king!"—A foot-note states  
that, in the Credit River the young sports-  
men of the family had speared 200  
salmon in a single night.

The writer gives a charming description  
of Toronto in summer,—not forgetting  
the bull-frogs, which "are quite harmless  
I believe; though slander accuses them of  
attacking the young ducks and chickens."  
Often, she says, "I go down upon the  
green bank, or along the King's Pier,  
which projects about 200 yards into the  
bay. I sit there with my book, reading  
sometimes, but oftener watching untired  
the changeful colors as they flit over the  
bosom of the lake. Sometimes a thunder-  
squall from the west sends the little sloops  
and schooners scudding into the harbor  
for shelter. Sometimes the sunset con-  
verts its surface into a sea of molten gold,  
and sometimes the young moon walks  
trembling in a path of silver. . . . Ncr  
is the land without some charm. About  
4 miles from Toronto the river Humber

### Fifty Years of Progress

The Evolution of the Mutual is  
illustrated in the various of-  
fices occupied by the Company.  
Removal to new quarters or  
additions to old offices were  
continually demanded.

The first headquarters was  
"desk-room" in a conveyancers  
office. In 1878 the Mutual first  
had a "home of its own." This  
was several times enlarged and  
in 1912 gave place to the pres-  
ent building, perfectly adapted  
for carrying a maximum of  
business with a minimum of  
work and expense.

As a result the management is  
economical and efficient and  
has succeeded in furnishing  
maximum protection at mini-  
mum cost.

**Mutual Life  
of Canada**  
Waterloo-Ontario

FOR SALE  
**Hinman Milker**

4 unit, 24-stall outfit, in good condition, with or  
without 1½ h.-p. gas engine. Owner dis-  
continuing dairy business. Write:  
J. B. LEESON, R. No. 1, Vanessa, Ontario  
When writing please mention Advocate.

"Advocate" advts. Pay.

## Serving the New Canadians

THE Church has not been neglectful of the new Canadians, whether settled in the crowded cities, or in colonies on the Western plains. But the effort to reach them with the ministry of Religion has been hampered by a lack of Missionaries to overtake the work, and by inadequate financial means.

### A Case of Misunderstanding

Many Church members do not realize the magnitude of the task. Not from unwillingness, but from lack of complete understanding of the situation, they have been content with former standards of giving. Even with four years' cessation of immigration, the needs have not been met. What will happen when the flood-tide rolls in again?

### The Reason for Home Missions

The great majority of immigrants now settled in the Dominion are men of good-will, with an aspiration for useful citizenship. They are Canadians now, helping to do the day's work of this land for the advantage of us all. The future public opinion of Canada, the future moral atmosphere of the nation will depend upon the willingness of the Church to face its whole task NOW.

### The Motives for Activity

You are a Canadian, proud of your country, and deeply concerned for its future.

You are a Christian, believing that the Gospel is the only dependable civilizing agency.

You are urged to pray, to serve and to give, that the Home Missions of your Church may be properly sustained in this day of national emergency.

### National Peace Thank-Offering

Simultaneous Every - Person  
Canvass by Each Communion

February 9-14

### The United National Campaign

Representing the Simultaneous but Independent Forward  
Movements of the Anglican, Baptist, Congregational,  
Methodist and Presbyterian Communions in Canada

comes down between high wood-covered banks, and rushes into the lake: a more charming situation for villas and garden-houses could hardly be desired than the vicinity of this beautiful little river, and such, no doubt, we shall see in time.

"The opposite side of the bay is formed by a long sand-bank called the 'island,' though, in fact, no island, but a very narrow promontory about 3 miles in length, and forming a rampart against the main waters of the lake. At the extremity is a light-house, and a few stunted trees and underwood. This marsh, intersected by inlets and covered with reeds, is the haunt of thousands of wild fowl, and of the terrapin, or small turtle of the lake; and as evening comes on, we see long rows of red lights from the fishing boats gleaming along the surface of the water, for thus they spear the lake salmon, the bass, and the pickereen.

"The only road on which it is possible to take a drive with comfort," she notes, "is Yonge Street, which is macadamized for the first 12 miles." On the west side of Toronto "you are immediately in the pine-forest." To the north there are "some commodious and even elegant houses," while "the wooded shores of the lake are very beautiful, and abounding in game. In short, a reasonable person might make himself very happy here, if it were not for some few things, among which those Egyptian plagues, the flies and frogs, in summer, and the relentless iron winter, are not the most intolerable."

Nevertheless, she is meditating flight. She has determined—bad roads, bad inns, Indians and what not intervening—to take a trip to the western borders of the Province. At this point to-day must we leave her.

(To be continued.)

### The Children's Poem.

The Squirrel.

BY CONSTANCE NAAR.

Tell me, cunning little squirrel, why you  
always chase around,  
Up one tree and down another, scarcely  
resting on the ground?

"Spouse you're going to a party—looks as  
if you'd curled your tail,  
And your big black eyes are shining as  
you scamper on your trail.

Stop a minute, little Frisky, don't you  
know your fur looks fine?  
What you say? You'll miss your dinner?  
Come to me—I'll give you mine.

### Serial Story

"His Family."

BY ERNEST POOLE.

(Serial rights reserved by the Farmer's  
Advocate and Home Magazine.)

CHAPTER XX.

Roger had been spending a long, quiet evening at home. He had asked John to dine with him, and they had chatted for a time. Then John had started up to his room. And listening to the slow, shuffling step of the cripple going upstairs, Roger had thought of the quick, eager feet and the sudden scampers that would be heard as the silent old house renewed its life. Later he had gone to bed.

He awakened with a start. The telephone bell was ringing.  
"Nice time to be calling folks out of bed," he grumbled, as he went into the hall. The next moment he heard Deborah's voice. It was clear and sharp with a note of alarm.

"Father—it's I. You must come to Edith's apartment at once. Bruce is hurt badly. Come at once."

When Roger reached the apartment, it was Deborah who opened the door. Her face had changed, it was drawn and gray. She took him into the living room.

"Tell me," he said harshly.  
"It was just outside the theater. Bruce and Edith were out in the street and got caught by some idiot of a chauffeur. Bruce threw Edith out of the way, but just as he did it he himself got struck in the back and went under a wheel. Allan brought him here at once, while I telephoned for a friend of his—a surgeon. They're with Bruce now."

"Where's Edith?"

"She's trying to quiet the children. They all woke up—" Deborah frowned—"when he was brought in," she added.

"Well" breathed Roger. "I declare." Dazed and stunned, he sank into a chair. Soon the door opened and Allan came in.

"He's gone," he said and Deborah jumped. "No, no, I meant the doctor."

"What does he say?"  
"Bruce can't live," said Allan gently. In the tense silence there came a chill. "And he knows it," Allan added. "He made me tell him—he said he must know—for business reasons. He wants to see you both at once, before Edith gets that child asleep."

As they entered the room they saw Bruce on his bed. He was breathing quickly through his narrow tight-set jaws and staring up at the ceiling with a straining fixed intensity. As they entered he turned his head. His eyes met theirs and lighted up in a hard and terrible manner.

"I'm not leaving them a dollar" he cried.

"We'll see to them, boy," said Roger, hoarsely, but Bruce had already turned to Baird.

"I make you my executor, Allan—don't need it in writing—there isn't time." He drew a sudden quivering breath. "I have no will," he muttered on. "Never made one—never thought of this. Business life just starting—booming—and I put in every cent." There broke from him a low, bitter groan. "Made my money settling other men's muddles. Never thought of making this mess of my own. But even in mine—I could save something still—if I could be there—if I could be there—"

The sweat broke out on his temples, and Deborah laid her hand on his head. "Sh-h-h," she breathed. He shut his eyes.

"Hard to think of anything any more. I can't keep clear." He shuddered with pain. "Fix me for them," he muttered to Baird. "George and his mother. Fix me up—give me a couple of minutes clear. And Deborah—when you bring 'em in—don't let 'em know. You understand? No infernal last good-byes." Deborah sharply set her teeth.

"No, dear, no," she whispered. She followed her father out of the room, leaving Allan bending over the bed with a hypodermic in his hand. And when, a few moments later, George came in with his mother, they found Bruce soothed and quieted. He even smiled as he reached up his hand.

"They say I've got to sleep, old girl—just sleep and sleep—it'll do me good. So you mustn't stay in the room to-night. Stay with the kiddies and get 'em to sleep." He was still smiling up at her. "They say it'll be a long time, little wife—and I'm so sorry—I was to blame. If I'd done, as you wanted and gone in their taxi. Remember? You said it might rain." He turned to George: "Look here, my boy, I'm counting on you. I'll be sick, you know—no good at all. You must stand by your mother."

George gulped awkwardly:  
"Sure I will, dad." His father sharply pressed his hand:

"That's right, old fellow, I know what you are. Now good-night, son. Good-night, Edith dear." He looked at her steadily just for a moment, then closed his eyes. "Oh, but I'm sleepy," he murmured. "Good-night."

And they left him. Alone with Allan, Bruce looked up with a savage glare.

"Look here," he snarled, between his teeth. "If you think I'm going to lie here and die you're mistaken. I won't, I won't let go. I'll show you chaps you can be wrong. Been wrong before, haven't you, thousands of times. Why be so damnably sure about me?" He fell back suddenly, limp and weak. "So damnably sure," he panted.

"We're never sure, my dear old boy," said Allan very tenderly. Again he was bending close over the bed. "We're not sure yet—by any means. You're so strong, old chap, so amazingly strong. You've given me hope—"

"What are you sticking into my arm?"

But Allan kept talking steadily on:  
"You've given me hope you'll pull through still. But not like this. You've got to rest. Let go, and try to go to sleep."

"I'm afraid to," came the whisper. But soon, as again the drug took hold, he mumbled in a drowsy tone, "Afraid to go to sleep in the dark. . . Say,

quiet the children—  
Deborah frowned—  
"I declare,"  
he sank into a chair.  
and Allan came in.  
said and Deborah  
I meant the doctor."  
?"  
" said Allan gently.  
there came a chill.  
Allan added, "He  
he said he must  
reasons. He wants  
once, before Edith  
p."  
the room they saw  
He was breathing  
is narrow tight-set  
o at the ceiling with  
intensity. As they  
head. His eyes met  
up in a hard and  
them a dollar" he

Allan—get Deborah in here, will you—  
just for a minute. One thing more."  
When she came, he did not open his  
eyes.  
"That you, Deborah? Where's your  
hand? . . . Oh—there it is. Just one  
more point. You—you—" Again his  
mind wandered, but with an effort he  
brought it back. "You and Edith," he  
said in a whisper. "So—so—so different.  
Not—not like each other at all. But  
you'll stick together—eh? Always—  
always. Don't let go—I mean of my  
hand."

"No, dear, no."  
And with her hand holding his, she  
sat for a long time perfectly still. Then  
the baby was heard crying, and Deborah  
went to the nursery,  
"Now, Edith, I'll see to the children,"  
she said. "Allan says you can go to  
Bruce if you like."  
Edith looked up at Deborah quickly  
and as quickly turned away. She went  
in to her husband. And there, hour by  
hour, through the night, while he lay  
inert with his hand in hers, little by little  
she understood. But she asked no  
question of anyone.

At last Bruce stirred a little and began  
breathing deep and fast.  
And so death came into the family.  
(To be continued.)

### Current Events

Premier E. C. Drury is to seek election  
in Halton and Hon. Manning Doherty,  
Minister of Agriculture, in East Kent.

More than 200 delegates, very en-  
thusiastic over the promising outlook  
for the North Country, met in Convention  
at North Bay last week. Hon. Beniah  
Bowman, Minister of Lands and Forests,  
and Hon. Harry Mills, Minister of  
Mines were among the speakers.

The Ottawa Command G. W. V. A.  
proposes the erection at the Capital  
of a magnificent memorial hall in honor  
of the 60,000 Canadians who gave up their  
lives in the Great War.

The Federal Government has agreed to  
take over the branch railway lines  
in Saskatchewan, and will reimburse  
the Province on interest payments.

The Government has refused to sur-  
render the ex-Kaiser at the demand  
of the Entente powers.

The Chinese Government is experi-  
menting with a new system of Chinese  
shorthand with a view of ultimately  
adopting it as the script of the nation.

German buyers have contracted for  
250,000 barrels of herrings from Scottish  
fishing companies.

M. Deschanel, the new President of  
France, has had a long and distinguished  
career both in statesmanship and author-  
ship. M. Millerand, who succeeded Cle-  
menceau as Premier, has been asked  
to form a Cabinet. Clemenceau will  
go to Cairo, Egypt, for a rest.

The results of the elections in Ireland  
show the Sinn Feiners greatly in the ascen-  
dancy.

The Supreme Council has partly raised  
the blockade against Russia, but, it is  
reported, will set up a barrier across  
the Caucasus between the Black and  
Caspian Seas. The people of this region  
have asked for help against the Soviet  
advance, and it is probable that British  
troops will be sent to maintain the  
barrier, as a protection against Soviet  
invasion of Armenia, Mesopotamia, Persia  
and India. It is also reported that the  
Bolsheviki will be asked to consent to  
the establishment of certain free  
ports north and south of Russia, probably  
Riga and Odessa. Premier Lloyd George,  
who it is said, proposed the raising of the  
blockade, opposes Winston Churchill's  
idea that the Allies should invade Russia;  
he believes that would only solidify  
Russia and mean disaster to the Allies.  
The Bolsheviki are now in possession of  
the Ukraine, and have taken much of the  
ammunition and supplies sent by Great  
Britain to Gen. Denikine, who, at present,  
has taken refuge on a warship on the

Sea of Azov. Kolchak, whose concessions  
to liberal sentiment came too late to  
save him, has disappeared, and Semenoff,  
who was always opposed to Kolchak, has  
achieved some sort of supremacy in  
Eastern Siberia. Report also says  
that the Soviet Government at Moscow  
is providing the Amir of Afghanistan  
with the subsidies which the British  
have withdrawn.

### Gossip.

#### Shorthorn Herd Builders.

Robert Miller, Stouffville, Ont., writes  
as follows in a recent letter to "The  
Farmer's Advocate:"

"With this I am sending to you an in-  
creased order for space and change of  
material for advertisement; not that I  
have failed to get good results from my  
present advertisement, but we all like  
a change at times, and my herd is in  
such good form and I have such splendid  
young bulls and cows to offer, that I  
would like to tell it to the many men  
that really want the best. In my adver-  
tisement I say that we have furnished the  
foundations for many of the best herds  
in America. Just let me name a few  
and then think what an interesting story  
could be told about our career in Short-  
horns and always, Scotch Shorthorns.  
We sold to the Hon. M. H. Cochrane,  
Compton, Qué., his first cattle. We sold  
to Hon. W. C. Edwards his first cattle,  
and to the late James I. Davidson, John  
Snell, Bow Park Farm, Henry Cargill  
and W. D. Flatt; the men who made  
history for the breed, the men who in  
their turn, every one went to the top. I  
will not name the men who are breeding  
now in Canada, nor will I name the men  
in the United States who have built  
their herds from our foundation, but I  
will say that the three best herds in the  
United States, in the past 20 years, have  
been built from material furnished by me.  
I keep that kind and I sell them, sell  
them in hundreds, and in two years I  
know I have not had a single complaint.  
Every shipment that I have made to men  
who have never seen my farm, has been  
satisfactory. The last three reports from  
sales that I have recently made, were that  
the bulls more than pleased the men.

#### Imported Milking Shorthorns.

Imported dual-purpose Shorthorns are  
not too numerous in any of the nine  
Provinces in the Dominion, and for this  
reason we are pleased to direct attention  
to the splendid offering of young bulls  
advertised by Lynnore Farms, owned by  
Wallace Cockshutt, of Brantford. It is  
several years ago since Mr. Cockshutt  
brought out an importation which was  
up until that time, and probably still  
remains, the largest importation of dual-  
purpose Shorthorns ever brought from  
England. This importation it will be  
remembered included the two noted  
English sires, Conjuror and Director,  
both of which have since gone to head  
Government farms in Western Canada.  
Both bulls were used considerably in the  
herd, and many of the younger breeding  
females still in the herd are got by one or  
the other of these two sires. Following  
these came another imported bull, Thanet  
Marquis, which still remains the chief sire  
in service. Thanet Marquis is got by  
the noted English sire, Kingsthorpe  
Marquis, while on the dam's side he is a  
grandson of the 10,000-lb. cow, Red  
Tulip (imp.) one of the outstanding cows  
of the breed. This bull has been used  
almost exclusively for the past two  
seasons, and all of the young bulls now  
offered are got by him. The oldest of the  
bulls listed is a two-year son of Mimosa  
(imp.), a cow of exceptional quality, and  
is at present the largest cow in the breed-  
ing herd. She also has a 10-months son  
listed which is sired by Lord Cranford,  
a son of Director. Next comes an 18-  
months son of Fairy Duchess 37th (imp.),  
a 60-lb.-per-day cow. This calf is one of  
the strongest herd sire propositions of  
the lot, and his six-months-old brother,  
by Thanet Marquis, is also of this class.  
Rosewood 12th (imp.), a 9,000-lb. cow,  
has a year-old roan bull, and Stamford  
Empress 6th (imp.) also has one the same  
age—both are by Thanet Marquis.  
The only remaining calf of serviceable  
age is from Worcester Figett 13th (imp.)  
and sired by Thanet Marquis. Added  
to these are several others under the year,

**Send for this Free Book**

When you buy a phonograph you want to be sure that you are getting the best instrument to be had for the money—one that will give lasting satisfaction. But how can you be sure unless you know what to look for? This book outlines the vital points that should be considered. The author, Henry Purfort Eames, LL.B. is a renowned Concert Pianist, Lecturer and Director of the Pianoforte Dept. Cosmopolitan School of Music.

The Brunswick "All Phonographs in One" answers every one of the rigid tests which Mr. Eames says should govern phonograph purchases.

**Mail the Coupon Tonight**

The Musical Merchandise Sales Company,  
Dept. F. A. - 819 Yonge St., Toronto

Please send me free of charge and postpaid, the booklet "What to look for in buying a Phonograph"

Name.....  
Street or R.R.....  
P.O..... Province.....

**USE METAL SHINGLES for SAFETY and PERMANENCE**

and outstanding among these is a dark roan January calf from one of the best daughters of Director. As will be noted in the advertisement, Mr. Cockshutt is offering a number of sows of the English Large Black breed. These are from the sires and dams imported by Lynnore Farms some two or three years ago, and have proved exceptionally profitable.

Dr. Louis St. Maurice, a Paris Physician, declares that people should wear night caps, and that unprotected craniums at night are responsible for many cases of cold in the head, grippe and even influenza. To cure cold in the head he advises wearing a woolen night cap and drinking hot lemonade.

"SALADA" Tea is Pure Tea, Fragrant and of Delicious Flavor, stimulating and refreshing. "Watch for the Name" on every genuine sealed packet.

# "SALADA"

27 Years in Public Service.

## FARMERS' BUSINESS



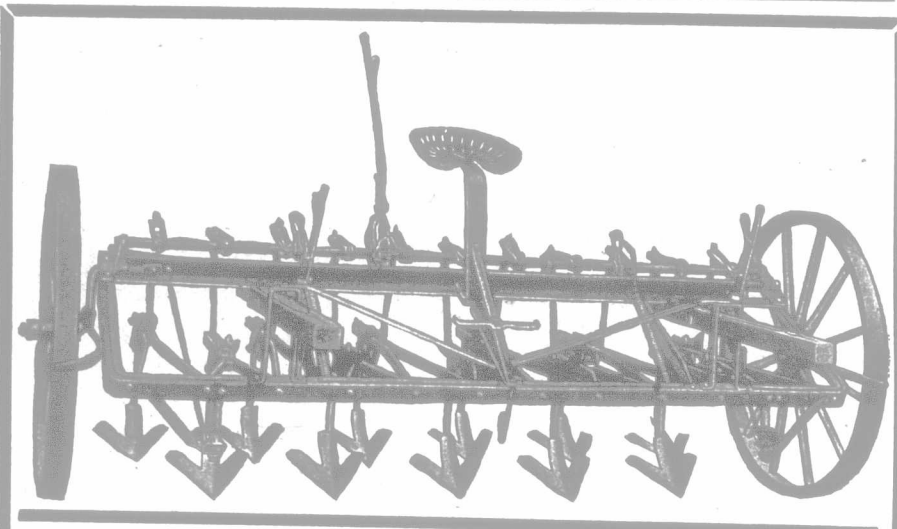
15

## THE MERCHANTS BANK

Head Office: Montreal OF CANADA Established 1864.

With its 138 Branches in Ontario, 44 Branches in Quebec, 1 Branch in New Brunswick, 2 Branches in Nova Scotia, 36 Branches in Manitoba, 46 Branches in Saskatchewan, 86 Branches in Alberta, and 12 Branches in British Columbia, serves rural Canada most effectively.

WRITE OR CALL AT NEAREST BRANCH.



## Buy the John Deere Stiff-Tooth Cultivator

It does better work with less draft. Makes a better mulch. All shovels lift level. They are wide, and provide a substantial overlap. Every bit of ground is pulverized. No weeds are missed or pushed aside.

Heavy, high carbon steel frame angles and angle braces make the John Deere Stiff-Tooth Cultivator extra strong. It lasts longer. Mechanically correct and well braced against every possible strain. It is easily adjusted and operated.

See this thorough-working Stiff-Tooth Cultivator at your nearest John Deere dealer's store. You will then appreciate its big advantage.

**JOHN DEERE MANUFACTURING CO., LTD.**  
WELLAND, ONTARIO

### Silver Stream Holsteins

Special offering—Four choice bulls fit for service sired by King Lyons Colantha, the records of his six nearest dams average 30.10 lbs. butter in 7 days and from R. O. P. tested dams. Individually as good as their breeding. Write at once for particulars and price, or better, come and see them.

JACOB MOGK & SON, R. R. 1, Tavistock, Ont.

## Markets

Continued from page 168.

### Montreal.

Horses.—Little change takes place in the market for horses from week to week. Demand was quiet and prices steady, being: Heavy draft, weighing 1,500 to 1,600 lbs., \$250 to \$300 each; light draft, 1,400 to 1,500 lbs., \$200 to \$250; light horses, \$125 to \$175 each; culls, \$75 to \$100 each, and saddle and carriage horses, \$200 to \$250 for choice.

Dressed Hogs.—The market for dressed hogs held steady during the week, and prices were at the same point as the previous week, being 24c. to 25c. per lb. for country dressed, light weights, and 22c. to 23c. for heavies.

Poultry.—The weather has been favorable to trade, and receipts of chickens and fowl have been fairly large. Prices were steady, being 47c. to 48c. per lb. for choice turkeys, and 44c. to 46c. for common to good. Common chickens were selling as low as 25c. and 27c., but good brought 30c. to 32c., and choice 33c. to 35c. Geese sold at 26c. to 30c., and ducks at 38c. to 40c. per lb.

Potatoes.—Supplies of potatoes have been growing scarcer day after day, and prices have been mounting in a way seldom before experienced. It looks as though the scarcity of supplies had suddenly been realized. Cold weather is unfavorable to deliveries, and sales of Quebec white stock were taking place at \$4.25 to \$4.50 per bag of 90 lbs., ex-store, while in car lots they were selling at about \$1 under these prices.

Eggs.—The market for eggs may possibly have reached the top. At any rate, prices were no higher and may be a little lower, being 89c. to 90c. per dozen for fresh gathered. Selects were 62c., No. 1 are 54c., and No. 2 are 51c. to 52c.

Butter.—The market for butter is rather on the easy side, and quotations on finest grass creamery were actually lower, being 65 $\frac{1}{2}$ c. to 66c., fine being about 1c. less than these prices. Current receipts were 60c. to 61c., and dairy butter 57c. to 58c. per lb.

Cheese.—Finest colored cheese was quoted at 30 $\frac{1}{2}$ c. per lb.; white being 30c. to 30 $\frac{1}{4}$ c., and tail ends were 27c.

Grains.—Car lots of No. 2 Canadian Western spot oats sold at \$1.12 per bushel, ex-store; No. 3 being 97 $\frac{1}{2}$ c.; tough No. 2 being 99 $\frac{1}{2}$ c., and tough No. 3 being 97 $\frac{1}{2}$ c.

Millfeed.—The market was steady, bran being \$45.25 per ton, and shorts \$52.25 per ton, pure barley meal being \$75 to \$76, and mixed grain mouille \$73 to \$75 per ton, including bags, delivered.

Baled Hay.—No change took place in the price of hay, and No. 2 timothy hay was still selling at \$25 to \$26 per ton, No. 3 being \$23 to \$24, and clover and clover mixed being \$22 to \$22.50 per ton, extra.

Hides.—Dealers report a steady market with cow and steer hides quoted at 34c. per lb., bulls at 25c., calf skins at 75c. each per lb., and kips at 35c. Lambskins were \$4 each, and horse hides \$9.50 each.

### Sale Dates.

Feb. 4, 1920.—Miller & Dryden.—Shorthorns.

Feb. 12, 1920.—Lambton County Purebred Live-stock Breeders' Association, Petrolia, Ont.

Feb. 18, 1920.—I. N. Howe, R. 2, Mossley, Ont.—Holsteins.

March 2, 1920.—Victoria County Purebred Stock Association, Lindsay, Ont.

March 3, 1920.—Guelph Fat Stock Club, Guelph, Ont.—J. M. Duff, Sec'y.

March 4, 1920.—W. G. Strong & Sons, Gorrie, Ont.—Ayrshire.

March 4, 1920.—Geo. M. Hearne, Burford, Ont.—Shorthorns.

March 4 and 5, 1920.—Union Stock Yards, Toronto, Ont.—Clydes, Percherons, Shires and Belgians.

March 10, 1920.—A. G. McNiven, Putnam, Ont.—Ayrshire.

March 10, 1920.—Caledonia Shorthorn Breeders, Caledonia.

March 11, 1920.—Russell Bryant, Strathroy, Ont.—Holsteins.

March 16, 1920.—London District Holstein Breeders' Club, London.

March 24, 1920.—Perth Breeders' Holstein Club, Stratford, Ont.

## THE MOLSONS BANK

Incorporated in 1855  
Capital & Reserve \$9,000,000  
Over 120 Branches

### The saving habit

like all other good habits is the result of resolution and practice.

By depositing regularly a portion of your earnings in THE MOLSONS BANK, the saving habit is soon acquired.

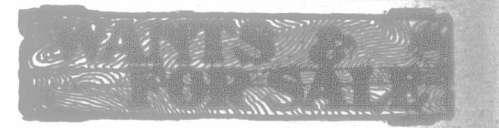
Avoid careless spending by opening a savings account with us.

## Dye Old, Faded Dress Material

"Diamond Dyes" Make Shabby Apparel Stylish and New—So Easy Too.

Don't worry about perfect results. Use "Diamond Dyes," guaranteed to give a new, rich, fadeless color to any fabric, whether wool, silk, linen, cotton or mixed goods,—dresses, blouses, stockings, skirts, children's coats, draperies,—everything! A Direction Book is in package.

To match any material, have dealer show you "Diamond Dye" Color Card.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock.

TERMS—Four 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. No advertisement inserted for less than 60 cents.

I HAVE ALL KINDS OF FARMS FOR SALE from 50 to 250 acres, inclusive, and at good prices for quick buying for the 1st. of March, especially one of 250 acres with splendid buildings, the very best of land, well watered and well fenced, and at the low price of Sixteen thousand, (\$16,000.00) to wind up an estate. This is only one of the many bargains on my list. Colthart's Real Estate Office, Box 33, Fergus, Ont.

SINGLE MAN, THOROUGHLY EXPERIENCED in farm work, wanted at once. Good home; yearly contract; best wages; near Toronto, offered to good man. Box 76, Farmer's Advocate, London, Ont.

SCOTCH COLLIE PUPS FOR SALE. GUARANTEED heelers and workers; price \$10.00 a piece. Apply A. T. Macpherson, R. 1, Wilton Grove

WANTED BY FEBRUARY FIRST—MARRIED man and wife; yearly engagement; both must be efficient, experienced and cheerful workers. Daughter of eighteen years could also find employment assisting in house. Good home, salary and conditions are offered; near Toronto. Apply Box 74, Farmer's Advocate, London, Ont.

WANTED—RE-ENGAGEMENT AS DAIRYMAN—Single, 35; good milker (dry); purebred Holsteins or Jerseys. State wages. Box 80, Farmer's Advocate, London, Ont.

WANTED—AN EXPERIENCED MAN TO manage a model dairy farm. Agricultural graduate preferred; must have experience in care and management of high-class herd; must know what certified milk is and be able to produce it. Salary to start \$2,000 a year and free house. Address stating age, qualifications and experience, Employment Department, Laurentide Company, Limited, Grand Mere, Que.

## None - Such Seed Corn

We guarantee that if not satisfied, return at our expense within ten days from receipt of corn, and money will be refunded. Price, \$3.00 per bus., delivered and a bag furnished. Write for prices and particulars to

Cottam Farmers Limited, Cottam, Ontario

### Gossip.

In another column of this issue we published a list of the breeders' meetings to be held next week, in which the meeting place of the Dominion Shorthorn Breeders' Association was inadvertently given as the Prince George Hotel. The notices sent out by the Association state that the meeting will be held in the Temple Building, Bay Street, Toronto.

FOUNDED 1866

**THE BANK**

Organized in 1855  
Reserve \$9,000,000  
100 Branches

**Saving habit**  
Good habits is the  
foundation and practice.  
Regularly a por-  
tion of your earnings in THE  
BANK, the saving  
habit required.  
Savings spending by open-  
check with us.

**Faded Dress Material**

Make Shabby Apparel  
New—So Easy Too.

Get perfect results. Use  
guaranteed to give a  
new color to any fabric,  
linen, cotton or mixed  
dresses, stockings, skirts,  
caperies, everything!  
Work is in package.  
Material, have dealer  
and Dye" Color Card.

Be inserted under this  
column. Properties, Help  
and Pet Stock.  
10 cents per word each insertion.  
One word and figures for  
and addresses are counted  
company the order. No  
for less than 60 cents.

**SALES OF FARMS FOR SALE**  
inclusive, and at good  
price for the 1st of March.  
Cres with splendid build-  
ing, well watered and well  
price of sixteen thousand.  
to an estate. This is only  
one on my list. Colthart's  
33, Fergus, Ont.

**THOROUGHLY EXPERIENCED**  
wanted at once. Good  
best wages; near Toronto,  
Box 76, Farmer's Advocate.

**WORKERS FOR SALE. GUARANTEED**  
and workers; price \$10.00 a  
month, R.I., Wilton Grove

**JANUARY FIRST—MARCH**  
yearly engagement; both  
experienced and cheerful work-  
men years could also find  
in house. Good home,  
near Toronto, near Toronto,  
Advocate, London, Ont.

**MANAGEMENT AS DAIRY-**  
good milker (dry); pure-  
bred. State wages. Box 80,  
London, Ont.

**EXPERIENCED MAN TO**  
manage farm. Agricultural grad-  
uate with experience in care and  
management of stock; must know  
what to produce it. Salary  
and free house. Address  
and experience. Employ-  
ment Agency, Limited.

**Seed Corn**

If not satisfied, return  
within ten days from  
and money will be re-  
funded. Write for prices

limited, Cottam, Ontario

**Business**

Announcement of this issue we  
the breeders' meetings  
week, in which the meet-  
ing of the Dominion Shorthorn  
Association was inadvertently  
at the George Hotel. The  
meeting of the Association state  
will be held in the  
Bay Street, Toronto.

**Toronto Produce.**

Receipts of live stock at the Union Stock Yards, West Toronto, on Monday, January 26, numbered 306 cars, 4,472 cattle, 257 calves, 6,680 hogs, 691 sheep and lambs. Uneven market, trade slow at prices from 25 to 75 cents lower; top, \$14.10 for eleven steers averaging 1,190 pounds each. Cows and bulls fifty cents lower. Calves steady. Sheep were fifty cents lower; lambs steady, best \$18.50 to \$19.25 per hundred. Hogs strong; fed and watered selling at \$18.75 to \$19 per hundred.

**Breadstuffs.**

Manitoba Wheat—(In store Ft. William).—No. 1 northern, \$2.80; No. 2 northern, \$2.77; No. 3 northern, \$2.73.

Manitoba Oats—(In store Ft. William).—No. 2, C. W., 93c.; No. 3 C. W., 88 3/4c.; Extra No. 1 feed, 86 3/4c.; No. 1 feed, 86 1/2c.; No. 2 feed, 83 1/2c.

Manitoba Barley—(In store Fort William). No. 3 C. W., \$1.78 3/4; No. 4 C. W., \$1.46 3/4; rejected, \$1.35 3/4; feed, \$1.34 3/4.

Ontario Wheat—(f.o.b. shipping points according to freights)—No. 1 winter, per car lot, \$2 to \$2.01; No. 2 winter, per car lot, \$1.97 to \$2.03; No. 3 winter, per car lot, \$1.99 to \$1.99; No. 1 spring, per car lot, \$2.02 to \$2.08; No. 2 spring, per car lot, \$1.99 to \$2.05; No. 3 winter, per car lot, \$1.95 to \$2.01.

American Corn—(Track, Toronto, prompt shipment).—No. 3 yellow, \$1.78; No. 4 yellow, \$1.75.

Ontario Oats—(According to freights outside).—No. 3 white, 98c. to \$1.

Peas—(According to freights outside). No. 2, \$3.

Barley—(According to freights outside)—Malting, \$1.80 to \$1.82.

Buckwheat—(According to freights outside)—\$1.45 to \$1.48.

Rye—(According to freights outside)—No. 3, \$1.85 to \$1.88.

Manitoba Flour—(Toronto)—Government standard, \$13.25.

Ontario Flour—(In jute bags, prompt shipment)—Government standard, \$9.65 to \$9.85 Montreal; \$9.85 Toronto.

Millfeed—(Car lots, delivered, Montreal freights, bags included)—Bran, per ton, \$45; shorts, per ton, \$52; good feed flour, per bag, \$3.60 to \$3.75.

Hay—(Track, Toronto)—No. 1, per ton, \$26.50; mixed, per ton, \$25.

Straw—(Track, Toronto)—Car lots, per ton, \$16 to \$17.

**Hides and Skins.**

Hides f.o.b. country points—Beef hides 28c. to 30c. flat cured; 26c. to 28c. part cured; green or frozen hides 24c. to 26c.; deacon or bob calf, \$2.50 to \$3; hides, country take off, \$10 to \$12; No. 2, \$7 to \$9; No. 1 sheep skins, \$2.50 to \$4; yearling lambs, \$1.75 to \$2.50; horse-hair, farmers' stock, 38c. to 40c.

City Hides.—City butcher hides, green, 30c.; calf skins, green, flats, 60c.; veal kip, 35c.; horsehides, city take-off, \$8 to \$13.

Tallow.—City rendered, solids in barrels 13c. to 15c.; country solids in barrels, No. 1, 12c. to 15c.; cakes, No. 1, 12c. to 15c.

**Farm Produce.**

Butter.—Butter kept stationary in price on the wholesales during the past week—fresh-made creamery squares selling at 70c. to 72c. per lb.; creamery solids at 66c. to 68c. per lb. and choice dairy at 65c. per lb.

Eggs.—New-laid eggs kept practically unchanged in price, selling at 80c. to 85c. per doz., wholesales: Cold-storage selects, selling at 67c. and No. 1's at 64c. per doz.

Poultry.—Chickens and fowl are in demand, and prices kept firm: Ducks advancing slightly and geese and turkeys stationary. The following prices being quoted for liveweight and dressed varieties to the producer. Liveweight prices.—Chickens, spring, 25c. per lb.; ducklings, 25c. per lb.; hens, under 4 lbs., 20c. per lb.; hens, 4 to 5 lbs., 23c. per lb.; roosters, 19c. per lb.; geese, 18c. per lb.; turkeys, 35c. per lb.

Dressed.—Chickens, spring, 28c. to 35c. per lb.; ducklings, 32c. to 35c. per lb.; hens, under 5 lbs., 27c.; hens, over 5 lbs., 28c. per lb.; geese, 26c. per lb.; turkeys, 45c. per lb.; roosters, 25c. per lb.

Cheese.—Prices kept stationary on both new and old cheese, selling at 32c. and 34c. per lb., respectively, wholesale.

Honey.—There are only very light offerings in honey; the strained selling at 25c. to 26c. per pound, wholesale: while some extra choice brought as high as \$7 per dozen.

**Seeds.**

Following are the prices that whole-

# Loans to Farmers

No type of loan is more acceptable to this bank than loans to farmers.

It is our policy to use our funds to promote the national development of the country.

Reliable farmers who need credit to increase production, will find us ready to make advances in any reasonable amount.

## THE BANK OF TORONTO

THOMAS F. HOW  
General Manager



## "Galt" Adjustable Barn Roof Lights

Provide both Light and Ventilation at a reasonable cost

These Roof Lights are shipped complete, including the glass.

We manufacture everything in the Sheet Metal Line, and we manufacture only the best.

"GALT" Steel Shingles "GALT" Corrugated Sheets  
"GALT" Ventilators Silo Roofs Portable Granaries, etc.

### The Galt Art Metal Co., Limited

GALT .. ONTARIO



### BISSELL Double Action Harrows

will thoroughly cultivate and pulverize any soil. One Harrow is Out, Throw; the other is In Throw. They are simply constructed, rigid and durable. The Gangs are flexible and the Disk Plates are so designed that they "hang" right into the soil. Bissell Harrows are built in sizes and weights suitable for horse or tractor use. Write Dept. W for free catalogue.

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



salers were paying for alsike and clover at country points:—

Alsike, No. 1, fancy, \$29 to \$30; No. 1, bushel, \$27 to \$28; No. 2, choice, bushel, \$26 to \$27; No. 2 bushel, \$24 to \$25; No. 3, bushel, \$21 to \$23; rejected, bushel, \$14 to \$20. Red clover, No. 1, fancy, \$30 to \$31; No. 1, bushel, \$28 to \$29; No. 2, bushel, \$26 to \$27; No. 3, bushel, \$22 to \$24. Sweet clover, bushel, \$14 to \$15.75.

Wholesale Fruits and Vegetables.  
Potatoes and the most of the other

domestic vegetables, continued to advance in price, selling as quoted below:

Cal. vegetables also showed a firming tendency, celery and cabbage especially. Fruits kept practically stationary.

Apples.—Western boxed, \$3.50 to \$4 per box; Ontario's and Nova Scotia's, \$5.50 to \$9.50 per barrel; Ontario boxed, \$1.60 to \$3.50 per box; fancy Spys (Ontario's), \$12 per barrel.

Beets.—\$2 to \$2.50 per bag.

Cabbage—\$5 to \$6 per bbl.; Cal. new, \$7 to \$7.50 per case.

Cauliflower—California, \$6 per standard, crate, \$3 per pony crate.

Carrots.—\$2 to \$2.25 per bag.

Celery.—60c. to \$1.50 per dozen, \$4 to \$4.50 per small case; Theford, \$7.50 to \$8 per case; Cal. \$12 to \$15 per case.

Lettuce.—California Iceberg, \$5.50 to

## Percherons and Belgians THE POPULAR BREEDS

We have in our stables a select lot of Percheron and Belgian stallions and mares, running in age from 4 to 7 years. Our stallions weigh from 1,900 to 2,200 lbs., and mares from 1,700 to 2,000 lbs.

Use good breeding stock now and be ready to meet the demand which is sure to exist. All horses have been Government inspected, and we guarantee them to be satisfactory sure breeders; if they are not, you do not have to keep them.

We will sell on time to responsible parties. Look up our winnings at the Western Fair, Guelph Winter Fair and Ottawa Winter Fair. These will give you some idea as to the class of horses we are offering.

Inspection Welcomed.

Correspondence Solicited.

ADDRESS ALL CORRESPONDENCE TO

**G. R. Crouch,** Vice-President La Fayette Stock  
Farm Company of Canada, Limited London, Canada

The Company is composed of J. Crouch, President; G. R. Crouch, Vice-President and Treasurer; R. G. Ivey, Secretary; Directors, Wm. Bernard and Jas. McCartney.



## POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at four 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 60 cents.

**BUY YOUR BREEDING COCKERELS IN** S.-C. W. Leghorns, W. Wyandottes and S.-C. R. I. Reds, from one of the largest trap-nest poultry farms in Canada. Prompt shipment on receipt of \$5.00. All our trap-nests, trap-nest records and pens are under Government inspection. Also baby chicks and hatching eggs. Pure-bred Scotch Collie pups, well marked with white, and good cattle dogs, \$8 for females and \$10 for males. George Peal, Rockwood, Ont.

**BABY CHICKS FOR SALE—MY PRICE LIST** is now ready. It contains valuable information as to the care of baby chicks. Write for it; it is free. Hind, baby chick specialist; office, 222, Greenwood Ave., Toronto.

**BRED TO LAY S.-C. WHITE LEGHORNS—**choice cockerels \$3.00 each. Order baby chicks now. Literature free. Cooksville Poultry Farm, Cooksville, Ont.

**BRED-TO-LAY BARRED ROCKS—COCK-**ERELS three dollars and pullets two-fifty. A. Donaghy, Colborne, Ont.

**CHOICE BRED-TO-LAY BARRED ROCK** and White Wyandotte cockerels. Price, three dollars and upwards. Also Pekin drakes at five dollars. Leslie Kerns, Freeman, Ont.

**FOR SALE—HATCHING EGGS, \$1.50 A SET-**TING; baby chicks, 25c. each; bred-to-lay S.-C. White Leghorns and B. P. Rocks' Hillside Poultry Farm, Christian Z. Albrecht, Prop., Bamberg, Ont.

**INDIAN RUNNER, MUSCOVEY, WILD** Mallard ducks, White Gulls, Barred Rocks. Mrs. John Amesser, Tilbury, Ont.

**MAMMOTH BRONZE TURKEYS—PRIZE-**WINNERS, Western Fair. Angus Beatty, R. 1, Wilton Grove, Ont.

**MAMMOTH BRONZE TURKEYS—BRED** from prize stock; also Scotch Collies. R. G. Rose, Glanworth, Ont.

**PEDIGREED COCKERELS, BARRED ROCKS,** \$5.00, from 260 and 254-egg hens. Ten pullets laid 2,034 eggs in eleven months. F. Coldham, Box 12, Kingston, Ont.

**PRIZE-WINNING STRAINS OF S.-C. BROWN** and Buff Leghorn cockerels, Fawn and White Runner drakes and ducks, \$3 each; two, \$5. L. G. Mutton, Mitchell, Ont.

**ROSE-COMB (REDS) COCKERELS—GOOD** winter-laying strain; three-fifty. Alex. McKinney, Erin, Ont.

**WHITE WYANDOTTE COCKERELS BRED** from our Guelph champions 1919, \$4.00 up. Extra good laying strain. Satisfaction guaranteed. R. Trivett, Newmarket.

**15 S.-C. WHITE LEGHORN COCKERELS, 20** pullets and yearling hens for sale, at \$2 and \$3 each. Farrow and Walter Rose strains. No better blood lines in Canada. T. A. Faulds, London.

### Clark's Buff Orpingtons

Exhibition and layers combined. Best general-purpose fowl. 10 yearling cocks \$5 to \$10, 50 hens \$3 to \$5, 50 cockerels \$4 to \$10, 50 pullets \$3 to \$5. Order a breeding pen properly mated. O.A.C. Barred Rocks from College best layers. 25 cockerels \$3 to \$5, 25 hens \$2.50, 50 pullets \$2.50 to \$3.

J. W. CLARK, Cedar Row Farm  
Catsville Ontario

FOR SALE

### Barred Rock Cockerels

The O.A.C. bred-to-lay strain. Finely barred, single comb, rich yellow legs; sisters laid at 5 months. Prices—One \$4, two \$7, three \$10.

A. H. GROZIER  
Meadowdale Ontario

### POULTRY WANTED

It will pay you to sell your poultry to the best market in Western Ontario. Special prices this month for heavy live hens. Be sure and sell to  
G. A. MANN & CO.  
78 King St. London, Ontario

\$6 per case; Florida, \$3 per short hamper; leaf, 30c. to 35c. per dozen.  
Onions.—\$7 to \$8 per cwt., \$5 to \$5.50 per 75 lbs.; Spanish, \$7.50 to \$8.50 per case, \$5.50 to \$5.75 per three-quarter case.  
Parsnips.—\$2.50 to \$3 per bag.  
Potatoes.—\$4.25 to \$4.50 per bag.

### Buffalo.

**Cattle.**—Cattle trade at Buffalo last week was quite satisfactory on butchering cattle but noticeably weak on anything in the shipping steer line, unless on the very choice to prime order. Most anything in the butchering line was wanted and at good strong to higher prices, the demand being especially strong from local killers. On shipping steers, eastern killers were slow to take hold, playing the Buffalo market against western points. There were a few Canadian shipping steers but mostly natives, best of which ranged from \$14.50 to \$16. Very few Canadians ranged above \$12.50 to \$13.50. A fairly good kind of yearlings sold up around \$12 to \$13, and the very best handy butchering steers showed a range of from \$13 to \$13.50, with good butchering heifers running generally from \$10.50 to \$11. Trading was very slow in the stocker and feeder division. Bulls sold at strong prices and on milk cows and springers only the selected kinds found sale at anything like satisfactory prices. Offerings for the week totaled 3,150 head, as against 4,600 head for the preceding week as compared with 5,925 head for the corresponding week a year ago. Quotations:

**Shipping Steers — Natives —** Very choice heavy, \$16.50 to \$17; best heavy, over 1,300, \$15.50 to \$16; fair, over 1,300, \$13 to \$14; best, 1,200 to 1,300, \$15 to \$15.50; good, 1,200 to 1,300, \$14 to \$15; plain, \$11.50 to \$12.

**Shipping Steers — Canadians —** Best heavy, \$14.25 to \$14.75; fair to good, \$13 to \$13.50; medium weight, \$12.50 to \$13; common and plain, \$11 to \$11.50.

**Butchering Steers.**—Yearlings, fair to prime, \$14 to \$15.50; choice heavy, \$13.50 to \$15.50; best handy, \$13.25 to \$14; fair to good, \$11 to \$12.50; light and common, \$9 to \$10.

**Stockers and Feeders.**—Best feeders, \$9.75 to \$10.25; common to fair, \$8 to \$9; best stockers, \$8 to \$8.50; fair to good, \$7.75 to \$8.25; common, \$6 to \$7.

**Milkers and Springers.**—Good to best, small lots, \$100 to \$150; in carloads, \$90 to \$100; medium to fair, small lots, \$80 to \$85; in carloads, \$70 to \$75; common, \$50 to \$55.

**Hogs.**—Market got a lower start on the opening day of last week, but after Monday prices were on the jump. The week opened with several decks of heavies, selling at \$15.50, but some pretty weighty hogs brought \$15.75 and this price also caught the bulk of all other grades. Tuesday prices were up 10 to 25 cents, and about a steady trade was had on Wednesday. Thursday's market was unevenly higher, range being from \$15.90 to \$16.25, while on Friday heavies sold at \$16.25, and other grades landed at \$16.40 and \$16.50. Good roughs ranged from \$14 to \$14.50, and stags \$10 to \$12. Receipts the past week were 32,800 head, as compared with 34,180 head for the week before and 22,000 head for the same week a year ago.

**Sheep and Lambs.**—Market occupied a very favorable position all of last week. Monday and Tuesday, which were the low days for lambs, tops sold at \$21, top for the next two days was \$21.25, and

## Away With the Scrub Sire and His Offspring

The 4th Annual Sale of Registered Stock of the  
Lambton County Pure Bred Live-stock  
Breeders' Association.

MARKET SQUARE, PETROLIA, ON

Thursday, February 12th, 1920

## 75 Head Choice Cattle

Consisting of 61 head of Shorthorns,  
2 Aberdeen-Angus, 4 Hereford bulls,  
cows and heifers, 1 Clydesdale stallion,  
3 Berkshire hogs, 1 Chester  
White and 1 Bereshire sow.

**Shorthorns.**—Such families as Rosemary, Carnation, Winsom, Mar Rachel, Lancaster, Jealousy are represented.

**Aberdeen-Angus.**—Such families as Merriman, Warlock, Tollo and Elector.

**Herefords.**—Such families as Bonnie Brae, Lord Roberts, Forest Hustler, Whitney, Dock Publisher.

Apply to Secretary for catalogue.

Sale under cover if stormy

W. S. STEADMAN, Petrolia, President

W. P. MACDONALD, Petrolia, Secretary

## WANTED Crate Fed Chickens

Dressed

Also

Large Hens Alive or Dressed

Write for price list.

WALLER'S 702 Spadina Ave.  
TORONTO

## Crate-Fattened Poultry

We are open for shipments of crate-fattened poultry. Highest market prices paid, according to quality.

HENRY GATEHOUSE & SON

Fish, Oysters, Game, Poultry, Eggs  
and Vegetables.  
144-350 West Dorchester Street, Montreal

## Questions and Answers.

### Pasture Crop.

I want to sow a crop that will give good pasture when the grass gets short. What mixture would you recommend? How would oats, peas and vetches do? Where could I secure the vetches? W. B.

Ans.—The oats, peas and vetch mixture, while satisfactory for a summer pasture crop, is more generally used as a silage crop in districts where corn cannot be successfully grown. Oats and red clover sown in the spring gives very satisfactory pasture. The cattle could be turned on when the oats are about ready to come in head. If left too long there is not the same second growth. The pasturing of the oats does not seem to injure the stand of red clover. The stock could be turned on early in July and thus relieve the other pasture and give it a chance to pick up. We believe that in the oats, peas and vetch mixture about a half bushel of vetch is sown. This seed can be secured through a seed store.



# Royal Purple Stock and Poultry Specifics and Foods

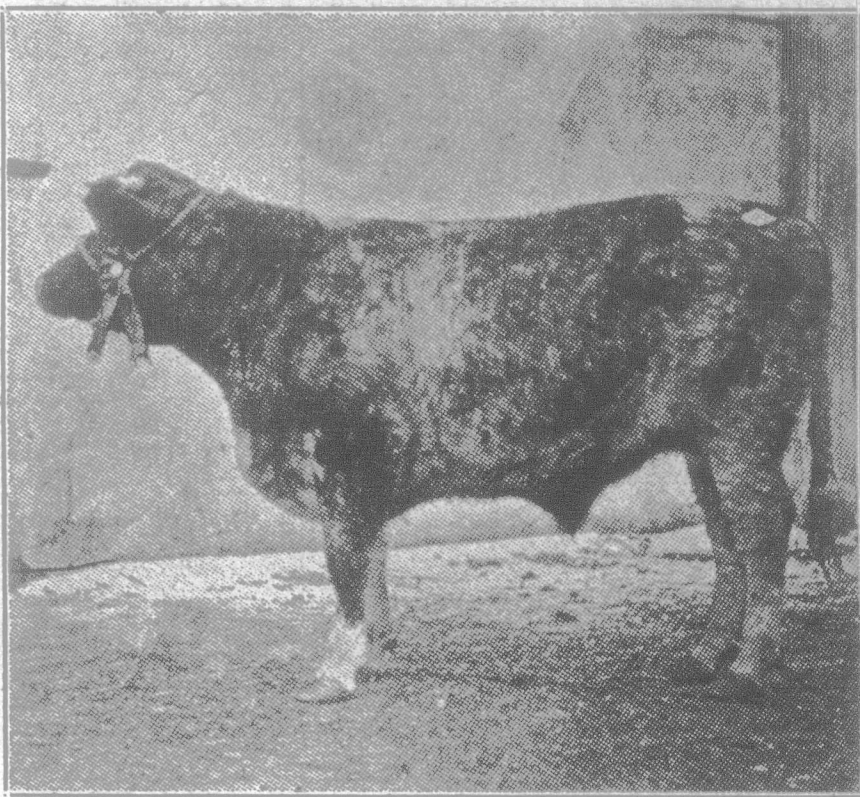
In the manufacture of all our Stock and Poultry Condition Powders and Remedies we eliminate the cheap filler which is used by many manufacturers to make up a large package, and give you pure material which you can adulterate yourself if you wish. Mr. Farmer, how does this appeal to you?

## Royal Purple Stock Specific

is a pure unadulterated condition powder, it is not a dope. It can be used throughout the entire feeding season and will not do your animals one iota of harm, works entirely on their digestive organs, causes them to assimilate the foods properly and digest every particle of food value. Fifty-five to sixty per cent. of food value is a fair average of what the animal takes out of its food without this condition powder: it makes their coats sleek and causes them to take on a healthy appearance in a very short time.

### What We Claim For It

Cows will give from three to five pounds more milk per day during the winter months. You can fatten pigs a month earlier, have larger and better pigs and save a month's time and feed. You can fatten horses ready for sale in four to six weeks. If you don't believe us try a 60c. package on the worst animal you have on your place and be convinced. How many times have you said to yourself, "No matter how much I feed my animals they do not seem to thrive". This, Mr. Farmer, is because your animals are not in a healthy thriving condition. Royal Purple Stock Specific will compel them to put on a thrifty appearance in a short time and yet it will cost you less than 15c. per month per animal to use it. Put up in 60c. packages, \$1.75 and \$8.00 tins. If you have a lot of stock buy the large tin. It contains sixteen 60c. packages.



**PURE BRED STEER** under 1 year, entered in Lot No. 3, Toronto Fat Stock Show, Union Stock Yards, Toronto, Ont., Dec. 11-12, 1919, and awarded 1st Prize. Also entered for Royal Purple Calf Meal Special, and awarded 1st Prize. Fed and Exhibited by Mr. Oril Williamson, R. R. No. 1, Jarvis, Ont. Sold for 33c. lb. by Auction. Weight, 1190 lbs.

## Royal Purple Laying Meal

During the many years we have been making our high-class Stock and Poultry Specifics, we have had thousands of letters from Poultry raisers all over Canada, wanting to know what to feed their poultry. A hen is just like a factory. If you have lots of material in your factory, you can get out the finished product. The hen requires so much Protein, so much Fat, Ash Lime, etc., to make an egg and supply her bodily needs. Ordinary grains will give her a supply for herself and to make one egg every two to three days. For the accommodation of our customers, we have produced a Laying Meal which contains high-class meat meal, grains, etc., that will give her everything she requires for her bodily needs and produce an egg per day. If you cannot get this material from your dealer in your own town send us \$5.00 for a hundred-pound bag and we will ship it to you direct. This product certainly fills a long felt requirement for the poultry men and simplifies the matter of feeding.

MANUFACTURED BY

# W. A. Jenkins Mfg. Co., Limited

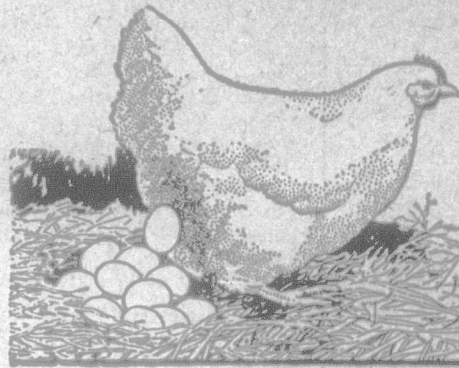
London, Ontario

## Royal Purple Calf Meal

There is probably no mixed feed on the Canadian market that the farmers have been buncoed more on than Calf Meal. You cannot make a substitute for milk with less than 10% Fat or over 20% Protein. Calves are entirely different from grown animals. You must supply them with material as much like milk as possible. In our Royal Purple Calf Meal we have a product on which you can raise calves after they are eight days old just as well as though you used new milk. At the Toronto Fat Stock Show this year there were eight calves shown not over a year old that averaged over one thousand pounds each, that were fed on this meal. If you will write us for our new booklet we will send you the full particulars and photographs of all these calves. Mr. Farmer, when you want calf meal you see that it contains over 10% Fat. Unscrupulous dealers and manufacturers are making meals that do not contain more than 7% fat and a large percentage of protein. Many of these meals are no better than ordinary dairy feeds. Fat costs two and a half to three times as much as protein in any market but you must have it in calf meal to make a substitute for milk. Our Royal Purple Calf Meal is put up in 25, 50 and 100-lb. bags.

## Royal Purple Poultry Specific

If your hens are not laying after the first of January it is because they are not housed properly and are in an unhealthy condition. There is no excuse for hens not laying if they are fed and housed properly. Our Royal Purple Poultry Specific, if used in the mash given them, will make them digest their food properly, make their digestive organs healthy and active and will produce the eggs for you as well in the winter as in the summer. The eggs are formed in batches from ten to fifteen, from the large egg down to the size of a pin head. If the hens are not healthy nature will lie dormant. As soon as our Poultry Specific is used nature becomes active. This is why so many people get eggs in a few days after using our Specific. If you do not get eggs it is your own fault. This Specific is put up in 30c. and 60c. packages, \$1.75 and \$6 tins.



## Royal Purple Chick Feed

made from all kiln dried white grains. You can raise 95 to 98% of your young chicks with this food, put up in packages and bags.

We also manufacture the following valuable brands:

- Royal Purple Lice Killer in 30c. and 60c. tins.
- " " Cough Cure in 60c. tins.
- " " Sweat Liment in 60c. bottles.
- " " Disinfectant in 35c., 65c. and \$1.40 tins.
- " " Roup Cure in 30c. and 60c. tins.
- " " Worm Powder in 30c. and 60c. tins.

Every article we make is guaranteed to do exactly as represented.

For Sale by reliable dealers everywhere. If you cannot get any of the above articles from your dealer write us direct.

**FREE**—Write us and we will send you one of our new books that are now being published, giving you all the common diseases of stock and poultry, how to treat them, how to build a hen house, and wilderness of valuable information.

## A Review of the Year 1919

Extracts from an address delivered by Sir Edmund Walker, President of The Canadian Bank of Commerce, at the recent annual meeting of the Bank

We have passed through a year in which the daily surprises have been as perplexing as during the war, and in which the anxieties have been as great, except that sometimes they affected rather the mere happiness of the world than human life itself. War, however, still continues in many countries, and there and elsewhere many have died from lack of food. The war has been won by the most superb co-operation in the attainment of one ideal—the winning of the war. We may lose all that victory seemed to secure by indulgence in countless theories, many of them aiming at the disintegration of society, instead of again co-operating in one ideal—the restoration of order and the improvement of social conditions, so that the happiness of the greatest number may be secured. It is not by standing idle while we discuss methods that we can get out of our present troubles. If the call is to "man the life boat" we do not wait for academic discussion before the boat is launched on its life-saving mission, and too much argument between capital and labor, just now, is madness in view of what we seek to save. The rising curve of prices cannot be made to turn downward without an increase of production, nor can we face the heavy obligations left by the war except by greatly increasing production. The man who does not do his best at his particular job is not merely helping to barricade the only pathway that will lead us out of our troubles, but he is helping to raise, or to maintain, the cost of the necessities of life for his own family. I may be called a friend of capital for saying this, but I am on record elsewhere as an advocate of many changes in the present relations of the employee and employer, all of them in favour of the employee.

### Insufficient Production.

While we and the rest of the world are failing to produce on a sufficient scale to provide for human comfort and to pay our debts, the price of everything has so increased, that although all clearing-house and trade returns show higher figures in money, these generally represent transactions based on smaller quantities of merchandise, and because we think in terms of dollars and not of merchandise, we are living in a fool's paradise. The imperious demands of war rapidly raised all prices, and payment was only possible by inflating the currency; unfortunately inflated currency sustains and further increases prices. If with our own currency we bought only goods made in our own country, the minimum of harm would be done, but possessing more currency and fewer commodities than usual, we are acting like the drunken sailor newly come ashore, and buying everything that fancy suggests, whether necessary or not, without regard to whether it is made in Canada or abroad. For every purchase of goods made abroad, whether in Great Britain or China, or anywhere else, we settle through New York, and the rise or fall of the rate of exchange, about which we are so much concerned, is the expression of our failure or the reverse, to pay cash or its equivalent. In this connection the speaker has for many years, at these annual meetings, presented the fact of our foreign trade, the peculiarities of our relations with the United States, the sales of our securities abroad to pay for the excess of our imports and the danger of mortgaging the future of our country, and has given frequent warnings as to the character of many of our imports.

### Our Exports.

The excess of our exports over imports for the year ending 31st March was \$343,491,000, as compared with \$623,647,000 for the previous year. Although so much smaller than for 1918, the excess was larger than in any previous year. The difference of \$280,156,000 is more than accounted for by a falling off of \$320,874,000 in our exports to Great Britain, and this again is due to a decrease of \$297,893,000 in exports of agricultural products and of \$87,318,000 in manufactured articles. For the six months ending in September the exports for the two half years are almost equal,

while the imports were \$33,571,000 less. It is gratifying to notice that, apart from the decrease in agricultural production, our figures have not been much altered by the cessation of the manufacture of munitions. Food is in greater demand than ever and our factories are behind in the production of almost every line of manufacture, while nearly every form of raw material is difficult to obtain. Our total foreign trade for the fiscal year was \$2,176,378,000, as compared with \$2,548,691,000 in 1918.

It is clear that, if our foreign trade were on a cash basis, we could pay the interest on our foreign debt and settle for our excess purchase from the United States without difficulty, but Europe cannot pay just now, and we must therefore limit our purchase from the United States where that is possible. Doubtless the markets for our securities in the United States will gradually widen, and it will become easier to adjust our accounts, but this will be a poor remedy. We cannot afford to increase our debts to foreign investors in view of the taxation we shall have to bear.

### Curtail Imports.

Let us consider a few items in our imports which at least suggest great possibilities of curtailment, if we are prepared to restrict our pleasures for the common good. Under the head of apparel we bought abroad to the extent of \$8,500,000, including headgear alone for over \$5,000,000; under fancy goods, \$4,000,000; fruits and nuts, \$25,000,000; furs, \$4,500,000; gramophones, over \$2,000,000; silk in various forms, \$21,000,000; tobacco, nearly \$12,000,000; in all \$77,000,000, mostly luxuries. Then we are yearly face to face with enormous imports of material, part of our requirements of which we already produce, or which it would be natural for us to produce. It is obvious that our national finances would benefit if we could either produce the following items ourselves, or avoid in any way their importation: bricks, clays and tiles, over \$4,000,000; coal, coke and charcoal, \$79,000,000; breadstuffs, \$26,000,000; all foodstuffs, \$121,000,000—much of this is doubtless absolutely necessary, but surely there is room for a large reduction; iron and steel in all forms, \$161,000,000, including machinery \$45,000,000; textiles in all forms, \$168,000,000; motors, railway cars and other vehicles, \$18,000,000. We have repeatedly drawn attention to items of this character in past years but, we fear, without much effect. At present, however, the people of Canada are feeling rather keenly the result of their indifference to their own affairs, and it seems worth while to press these facts once more on their attention.

### Imports From U. S.

There is one comforting feature about our trade with the United States. While in 1913 we bought \$2.70, last year we bought only about \$1.50 of goods for every dollar's worth bought by the United States from Canada. While our purchases have increased in value by 65 per cent., theirs have increased by 180 per cent. Comparing the totals, the imports for 1919 are less by \$46,000,000 than in 1918, but as in the item referred to in past years, military stores, there is a decline of \$80,000,000 and another decline of \$17,000,000 in pork, both due to the cessation of the war, the imports for ordinary purposes are much larger than ever before. The most notable increases are in traction engines, mainly for farming, about \$10,000,000, and in raw cotton about \$13,000,000.

### Reduced Wheat Export.

There are many handsome increases in exports to counterbalance increased imports, but the outstanding feature is the enormous decrease of \$295,000,000 in the value of exports of grain, of which \$270,000,000 is due to a decrease in exports of wheat. There is a reduction in quantity of 150,000,000 bushels, from 215,000,000 bushels of all grains in 1918, to about 65,000,000 bushels in the year ending March, 1919. In the item, "cartridges—gun, rifle and pistol," which has figure

so largely in our exports during the war, there is a decline of \$139,098,000. There is also a decline of \$12,000,000 in exports of flax seed. Against the decline in imports of pork there is a corresponding one in exports of bacon, but there is an increase of about \$28,000,000 in exports of meats and butter. There is an increase of \$14,000,000 in the item of ships sold to other countries. In our imports the totals of increases and decreases are not very far apart, but in exports we have the extraordinary condition of increases amounting to \$110,000,000 and decreases amounting to \$443,000,000. Had we been as fortunate in the quantity of merchandise we had to export in the fiscal year ending March, 1919, as we were in the previous year, our financial position would have been very different.

### Field Crops.

The preliminary estimate of the value of our field crops for the year 1919 is \$1,452,787,000, as compared with \$1,367,909,000 in 1918, the actual figures for which fell slightly short of the estimate. There was a decline in the value of grain crops, but a large increase in fodder crops and potatoes. Except in swine there is a slight increase in the numbers of all live stock on our farms. It is difficult as yet to obtain accurate figures as to the production of our mines for the year just closed. We estimated that of 1918 at \$220,000,000, and the actual figures were \$211,301,000. For 1919 the best estimate we can obtain is \$167,000,000, showing a falling off of nearly \$45,000,000, which is almost entirely in metals. Because of the ending of the war we produced only about half the quantity of nickel produced in 1918; about the same quantity of lead and zinc, at lower prices; less copper, also at lower prices; and less silver, but at higher prices.

### The Process of Adjustment.

The difficulties of reconstruction after the great war are even greater than we feared. The whole world is feeling the effect of four years in which the ordinary work and economics of life were not merely neglected, but the basis thereof was almost swept away. We are short of almost every commodity, the strongest evidence of this being the fact that millions of people in Europe face actual starvation. We cannot re-establish the normal supply of commodities except by working harder than usual, and we cannot lessen the terrible strain of high prices without doing the extra work which will put an end to the lack of commodities. We cannot adjust prices without also bringing about a contraction in the volume of paper money and other instruments of credit, and so far as it is possible to enforce contraction without interfering with the production of what is really necessary, the reduction of prices will be facilitated. In a word, bankers should not aid speculation, or assist ventures which do not directly lead to production. We are still building ships with feverish haste throughout the world, and we ought to be spending large sums on railroads in order that commodities may be freely distributed. The present cost of ocean transportation, quite as much as the cost of goods at the primary markets, stands like a huge barrier across the pathway of return to normal conditions. What is worse, however, is that even present prices, in the natural order of things, will go on rising until the lack in the world's supply of commodities has been filled, and there has been a large contraction in the volume of paper money now in existence.

### Wages and Prices.

In the case of many classes of wage earners there has been an adjustment of pay against this increased cost of living, but there are many instances in which there has been either no adjustment or one quite inadequate. There are, however, some classes of earners who are so highly paid, in comparison with the past, that they have unusual spending power, and, along with all the others who have profited unduly by the war, they are spending their money in such a manner as to increase still further the troubles of the less well-off. Apart from this, after the gigantic struggle of the war, the world has slackened its energies and is filled with argument and unrest. All these elements move along an ascending spiral which clearly ends in ruin if we cannot arrest their course.

Prices will be higher than before the war for many years to come, but a readjustment to tolerable conditions is absolutely necessary if we are to enjoy the peace bought at such a cost. Governments must cease borrowing and keep their expenditures within their powers of taxation; both individuals and Governments must spend less on things not absolutely necessary, and we must all work harder to produce the normal supply of all the commodities useful in life.

### Co-Operation Essential.

Canada, as I have already said, won its high place in the world's regard by superb co-operation in the one ideal of winning the war. Can we not compromise for the moment the differences between capital and labor, between farmer and manufacturer, between the various interests that are risking our future for the sake of their own particular grievances, and co-operate in another ideal equally great, the restoration of peace and the return of prosperity on a better foundation? With this accomplished the separate ideals of the industrial divisions of our society can be discussed with far more chance of fair adjustment than is possible in these difficult times.

### Must Increase Exports.

We know now roughly the cost of the war as represented by our public debt. This debt is held mostly at home but partly abroad. In addition, there were issues of securities made before and during the war by Governments, municipalities and private companies, and sold abroad. On the whole of this debt, so held abroad, the annual charge is about \$190,000,000 per annum. Of this roughly about \$65,000,000 is due to holders of our securities in the United States, and about \$125,000,000 to holders in Great Britain and Europe. This debt we can pay only by an excess of exports over imports or by new borrowings. The debt at home is our own domestic affair. Certain citizens have advanced the cost of the war to the nation, and we now have to distribute this cost by taxation over all the citizens of Canada (except those who escape taxation), so as to meet the annual amortization payments. If the annual payments are obtained by reasonably fair taxation, so levied that the taxes do not become a cause of restraining our industries, we shall not fail to win through, but to accomplish this, much study of the subject is necessary.

### Taxation.

Many forms of taxation not yet in use in Canada will doubtless be employed, in addition to those now in force, but the whole question should be approached without that class feeling which often causes taxes to be so appointed, that bitterness and a sense of injustice are felt by many who do not object to being heavily taxed so long as those who really can afford to pay their share do not escape. The income tax should be paid by a much larger number of citizens. The tax on surplus profits needs much study; there is all the difference in the world, both in justice and in the interest of the community, between a large aggregate of profit made by a small margin on each transaction and a similar sum made by an unfairly large margin of profit on each transaction. The community may be deeply interested for its own advantage in securing the extension of the first kind of transaction, while no one is interested in the success of the other class except the taxpayer himself. The tax in the end must be borne by our industrial activities, and we are foolish if, in our eagerness to escape our own share, we make such burdens so heavy on others that many of these activities must cease, and commodities that under fair conditions might be produced at home are replaced by imports from abroad.—Adv.

### Nearly Everyone Takes It.

EDITOR "THE FARMER'S ADVOCATE":

I find it very hard to get new names for "The Farmer's Advocate," as nearly everyone around here takes it. I just want to mention that "The Farmer's Advocate" appeals to more than the man on the land. In the list sent is the name of the manager of the local branch of the Merchant's Bank, and that of a merchant miller and grain-dealer here.

Leeds Co., Ont. C. H. McNISH.

**Trapping Muskrats.**

BY ROBERT G. HODGSON.

The muskrat once one of our lowest priced fur-bearers, now brings the highest price ever known in the history of the fur trade, and because of their large numbers are found in rural communities and especially around lakes and marshes. At the present time, with muskrats worth as high as \$5 each (one time we considered this a mighty good price for mink), there is a small fortune in muskrat trapping. There is no occupation that will return so much money in the same length of time as will muskrats, when you can get good trapping grounds.

Muskrats are very prolific, and one pair in a single year will often produce as high as twenty or more. It can therefore be easily seen that with the big price at present, and the large numbers in which they are found, it will pay the trapper who can, to devote all his time to trapping.

Muskrats do not become fully prime until spring, the latter part of February or the fore part of March. Their season of primeness lasts until the latter part of April in southern parts of Canada, and into May in the northern parts. The game laws of Ontario allow them to be taken during the spring only. Law or no law, they should never be taken at any other time, for then they would be unprime and would bring only a fractional part of what they would were they fully prime.

This article is not written to give detailed instruction in the actual methods used in taking these animals, as there will no doubt be plenty of good methods in this department; rather this is written to point to the exceptional money-making opportunity muskrat trapping at present offers, an opportunity that may never again be repeated; and to deal with the generalities that will be of most importance to amateur and advanced trappers as well. The writer has trapped for years, both with and against Indians and white professionals; has met many of the best trappers up in Hudson's Bay country; and for these reasons, and without egotism, feels that he can speak with authority.

Muskrats are not difficult animals to trap, as they can be taken by the greenest novice if he is at all careful in making the set (of course, the more experienced, and the more you know of muskrat habits, the more you will catch); the greatest difficulty comes in holding them in the traps once they are taken. For years, it has been a common thing among muskrat trappers, when giving their day's catch, to say, so many rats and so many feet. Scores of instances could be related where the rats lost represent a very large proportion of the catch. These rats escape because the traps are not the proper kind to use for them, and they either pull out or amputate their imprisoned foot; and are maybe lost to the trapper for good, because many die when so injured.

We now have the remedies for these evils, and all that is necessary is that the trapper apply them. He will find as a result that his losses in a season will not amount to a row of pins.

The first essential for muskrat trapping is the right kind of trap. The bone in a muskrat's leg is very brittle, and easily broken; the flesh and skin very tender. When a trap of the ordinary type is used, especially one with a strong spring and thin or rounding jaws, you are going to lose a large number of your muskrats, for the jaws snap shut, propelled by a strong spring of which there is no necessity, and the result is the bone is broken, and the muskrat escapes by pulling loose the tender hide and skin. What is required in muskrat trapping is a spring with just the right strength to hold the animal securely, and high, flat-faced or double jaws. This we find in the Victor 91, No. 1 Giant, or the Jump 81. These are the favorite traps of the big muskrat trapper, and it is seldom, if ever a rat is lost, due to any fault of the trap, when used in conjunction with a drowning device. The spring of a trap is the most important part of it, the spring of the foregoing being the result of years of study and experimenting.

At some sets it is impossible to use the sliding-wire or pole, but it is possible to use the extension chain, as directed, at any set for aquatic animals. Therefore, if for any reason you are unable to use the sliding device, use the extension chain.

During the spring, which is the muskrat's running season, they are not attracted by natural baits, and it is useless to try to lure them with such. They are very easily lured by scents that attract

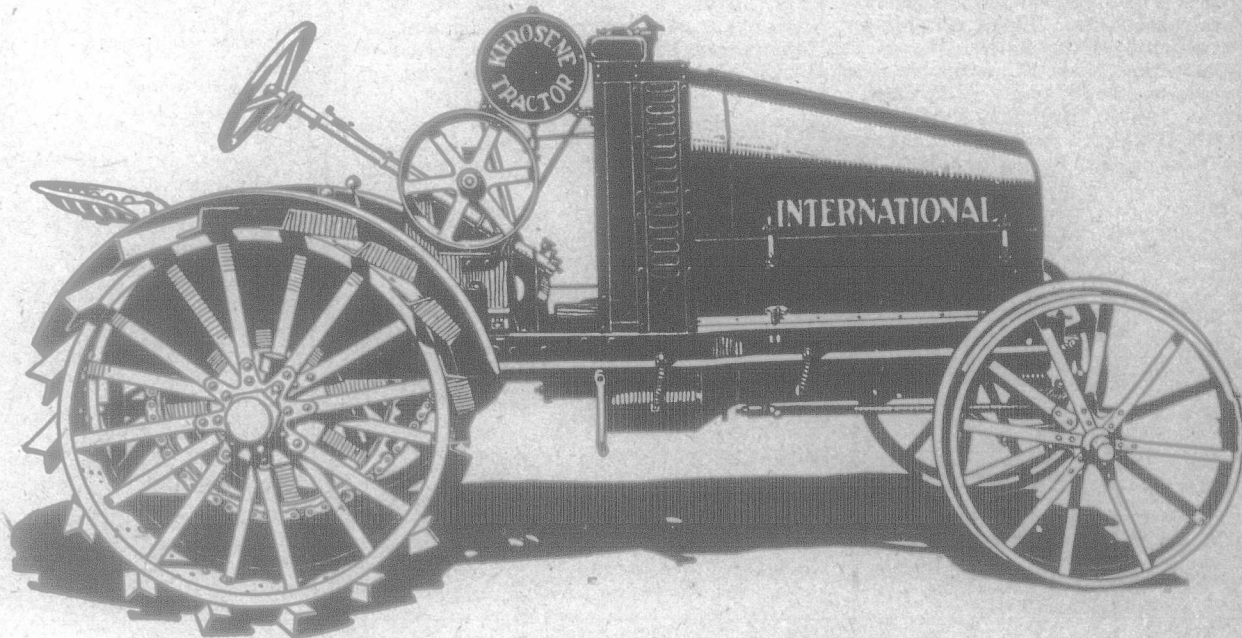
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from a sexual standpoint, however, and if you have no good formula for making such an equally blended compound, and can find no commercial lure of value, keep the musk you find on muskrats and use it. Keep it any way, of course, as it is highly attractive to most of the animals. This musk is secreted in small sacks just under the skin in front of the hind legs on the belly of the animal. It should be squeezed out of the small sacs into a bottle, and a couple of drops stationed over each set where sent can be used.

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### Profitable Trapping.

BY ROBERT G. HODGSON.

To get the most money out of trapping, it must be regarded the same as any business enterprise—as a business undertaking, and conducted strictly along these lines. One trapper can catch fewer pelts than another and yet he will receive more money for them and have more places to sell, because he takes only prime furs, is careful in skinning, stretching and drying them. This is fact, not theory, and I have seen scores of instances of it. There is little use in taking an animal if the same care is not expended on the skinning and curing of the pelt as was necessary to capture the animal. To most trappers, catching the animal seems of greater importance, yet if they only realize it, this is only incidental to the money he is going to receive. Getting the hide ready for market is the most important part of all, and novices gradually acquire this little piece of wisdom offered so freely now, at great expense later. Maybe experience is the best, but it is certainly the dearest teacher.

To succeed to-day, people must be specialists in their line of work, must understand the business thoroughly and must employ the latest improvements in their business. The trapper, if following trapping as a profitable side line and not as an exclusive profession, should know the habits of the animals he is trying to take, their general peculiarities, and must use in catching them the latest in traps and equipment and reduce his losses to a minimum and prepare his catch in the best manner possible.

There is also the humane phase to trapping that should be considered. It is not necessary to be fanatic and carry this to a point where the returns are lessened rather by combining humane treatment with trapping the catch increased rather than decreased. Some ways in which cruelties to animals can be lessened, at the same time increasing the catch, are the following.

Visit the traps every day, and as soon after daylight as possible. Most animals travel at night and are not afraid in the darkness, but when daylight comes they are afraid and when caught in traps they try much harder to escape during the day than during the night. Of course professional trappers cannot visit their traps every day, but the smaller trappers in the amateur and novice class easily can.

For mink, muskrat and other aquatic animals use the sliding wire, sliding-pole, or extension chains. The first two articles are so well-known, their make up and usage requires no explanation here. The extension chains in question can be secured from almost any hardware store, or can be obtained direct from the makers of Victor traps, if not, they are about a foot and a half in length, and of two sizes. There is a snap on one end of the chain to attach to regular trap chain and a ring on the other end. This chain allows the animal, when caught, to get out into deep water where, with the weight of the trap it soon drowns. However, I always find it best to push a small stick in the stream, out within perhaps ten inches of where the animal can reach when the chain is fully extended. When the animal goes out into the deep water, it is sure to wind the trap around the stick, and being unable to unwind it, soon drowns.

For skunk and such animals with burrows, use the Kill-um trap wherever possible. This trap catches the animal around the neck and kills it instantly. For coon, and also for marten and fisher (tree-climbing animals), when snow is deep, use the tree trap whenever possible, as this trap also kills instantly.

For the many other animals where these traps cannot be used, use the latest and most efficient of the steel traps. The Victor No. 1, Giant Victor 91-91½, Oneida trap 81-81½, etc. The jaws of all of these traps being either double, webbed or extra high, take a high hold on the animal and reduce to a minimum the escape of the animals by pulling or gnawing out, leaving a leg or several toes, and causing the animals a great deal of unnecessary pain.

Kill the catch with a swift, strong tap on the nose, with a club or by holding under the water for a minute or by choking it. Do not pound it all over the body, this not only causes the animal unnecessary pain, but what will interest

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For Sale—The Champion Galloway Bull,  
Jovial of Blackcombe (11716)

This bull has had an unbeaten show-yard career. He holds the championship of both "Royal" and "Highland" Shows, and is undoubtedly the best Galloway bull now living. He is an animal of great substance and quality, and is a sure stock-getter. Apply R. CAMPBELL, Manager Castlemilk Galloway Herd, Lockerbie, Scotland

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Offering includes one bull calf 18 months old and four younger bull calves. Inspection and correspondence invited.

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**ABERDEEN-ANGUS**

The present string of young bulls for sale includes some classy herd bull prospects, winners themselves and sired by champions. If interested in Angus write your wants. Visitors welcome.

G. C. CHANNON, Oakwood, Ontario  
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Angus, Southdowns, Collies  
Choice bred heifers. Bulls 8 to 16 months.  
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Do not miss the opportunity to secure some of the choice males and females of wonderful smoothness, quality and strain type that are being offered by

GEO. DAVIS & SONS  
Erie, Ontario - R. R. No. 1  
Herd sire a son of Black Abbott, Champion Angus Bull of Canada. Write for particulars.

Sunny Side Herefords—Choice bulls and heifer calves, young cows with calves at foot. Reg. Shropshire rams, ewe and ewe lambs. Inspection invited. All are priced to sell.  
Arthur F. O'Neill & Sons, R.R.No.2  
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Nine extra good young bulls for sale. Also females all ages. Show-ring quality.  
THOS. B. BROADFOOT, FERGUS, ONT.

the trapper more, it hurts the value of the hide by making it inflamed and covered with clots of blood wherever the stick hits.

Take animals only when they are fully prime, when it is neither too early nor too late in the season. Only prime skins are used in the best of fur garments. When an unprime animal is taken it means that the fur is worthless or almost so, and a prime animal must be used to take its place. The result: taking several animals where only one is necessary.

Do not poison the animals nor smoke them out for the same reason, i.e. many animals poisoned and smoked out are never secured and are absolutely lost to the fur trade.

Above all, never dig animals out. What would a fisherman be thought of who used dynamite, spears and nets for trout and other game fish? Why should a trapper who practices such unsportsmanlike methods be considered in any better a light than the fisherman in question? There is certainly much food for thought here. Any trapper will realize that, by following the foregoing instructions in regard to humane treatment of animals, they are not handicapping themselves in any way, rather they are increasing their trapping efficiency by incorporating these methods within their own and using them always.

In skinning your catch, use the greatest care at first until you get proficient and can skin fast, and at the same time, good. See that the fur of all animals is dry or as nearly dry as you can get it, and combed free of dirt and burrs, before placing on the stretching boards remove all superfluous flesh and fat on the flesh side of the hide as this not only spoils the appearance of the hide, but in the case of coon and skunk, often heavily coated with fat, the fat "burns" the fur and causes it to come out.

Be sure your stretching boards or stretchers are the correct shape and size so that the skin is correctly proportioned, and neither over-stretched nor under-stretched. For muskrat and skunk, use the wire stretchers now so common and easily obtainable. These are the correct shape and size, dry the hides quickly, are much easier to use than wooden stretchers and because of their longevity, are cheaper than the other inferior stretchers.

Study the habits and peculiarities in trait and food of the animals you are going to catch, get acquainted with fur and fur markets to better understand the fur trade, connect up with a good fur-house, get busy, work hard and send them your furs.

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EDITOR "THE FARMER'S ADVOCATE":  
I have taken "The Farmer's Advocate" for some forty years, and could not farm without it. It is the best farmer's paper I know of, and it is the first paper read in our home.  
R. R. MOWERAY.  
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You can make soil that is impoverished again produce those famous, old-time yields at very small cost. Just you use

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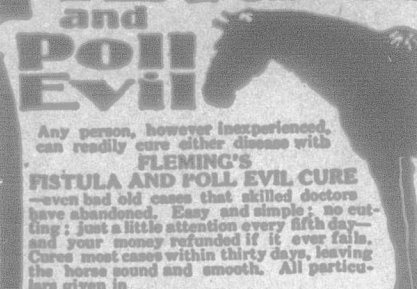
**EVERGREEN HILL FARM—R.O.P. SHORTHORNS**

Present offering: Two 12-month bulls by the R.O.P. bull St. Clare #84578, also a few heifers and heifer calves.  
S. W. JACKSON, WOODSTOCK, ONT.

**FAIRVIEW CLYDESDALE CHAMPIONS**

We have at present, several mares that have been champion winners at Toronto, Guelph, London and Ottawa. Look up our past winnings and call on us if you want something choice. We also have Shorthorn bulls and females of show individuality.  
ROBERT DUFF & SON MYRTLE, ONT.

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Any person, however inexperienced, can readily cure either disease with **FLEMING'S FISTULA AND POLL EVIL CURE**—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest Pocket Veterinary Adviser. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated.

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75 Church Street, Toronto, Ont.

### ENGLISH DUAL-PURPOSE Shorthorns

If you require a bull bred on the English system for milk and beef, we can sell you one of choice breeding, and in every way a good individual—one which will add value to your herd. We have a fine selection of young bulls at present, also English Large Black pigs.

CALL OR WRITE  
**LYNNORE STOCK FARM**  
F. W. COCKSHUTT, Brantford, Ont.

### Maple Shade SHORTHORNS

A dozen young bulls imported and my own breeding at moderate prices.

**W. A. DRYDEN**  
Brooklin - - - Ontario

**The Get of Burnbrae Sultan =80325= Shorthorn Bulls For Sale**

1. Successor =127444=, white, born March 29, 1918; dam Rosy Bud =99834=, by Waverly =72804=.
2. Ravensraig =12745=, roan, twin, born Nov. 19, 1918; dam Meadow Beauty 3rd (imp.), by Ben Leonard (80468).
3. Meadow Crown, white, twin with Ravensraig.
4. Royal Sultan, born 15 Feb., 1919, own brother to Successor.

Females in calf and with calves at foot.

**A. GORDON AULD**  
Arkel C.P.R. R. No. 2, Guelph, Ont.

### DUAL-PURPOSE SHORTHORNS

Present offering: Six young bulls, Reds and Roans, also a number of females. They have size, quality and breeding from good milking dams. Prices moderate. Satisfaction guaranteed.

**CHAS. GRAHAM - Port Perry, Ontario**

### Buy Glenfoyle Shorthorns

9 bulls, all ages; 25 heifers and cows. Herd bull 2,400 pound quality kind, which sire's dam and three nearest dam's milk records average over 9,000 pounds; also high-class yearling Clyde stallion. Come and see them.

**Stewart M. Graham - Lindsay, Ont.**

### Mardella Dual-purpose Shorthorns

8 choice young bulls; 30 females, cows and heifers. All of good size, type and breeding. Herd headed by The Duke; dam gave 13,599 lbs. milk, 474 lbs. butter-fat. He is one of the greatest living combinations of beef, milk and Shorthorn character. All priced to sell. Write, call or 'phone.

**THOMAS GRAHAM, Port Perry, R.R. 3, Ont.**

### SHORTHORN HERD SIRE FOR SALE

**Lavender Herd 109900**

A good animal and a choice sire. You may find it advisable to look him over if intending purchasing. Also one young bull of his get for sale.

**George C. Burt, Hillsburg, Ont.**

### Scotch Shorthorns

Herd headed by Master Marquis =123326=, by Gainford Marquis. Stock of either sex for sale. Also Oxford Down ewes.

**GEO. D. FLETCHER, Erin, R.R. 1, Ont.**

### LABELS

Live-stock Labels for cattle, sheep and hogs. Manufactured by the Ketchum Manufacturing Co., Ltd., Box 501 Ottawa, Ont. Write for samples and prices



### Gossip.

#### The Dryden-Miller Sale.

From present indications, the Dryden-Miller Sale of Shorthorns now scheduled for February 4th, promises to equal, if not overstep, all previous averages for the breed in Canada. As appears in the announcement, made by Messrs. Dryden and Miller in the opening of their catalogue, the cattle will not be found to be in extraordinary flesh, but as seen recently by a representative of this paper, they were showing in real choice breeding condition or in just the right bloom to be most profitable to their buyers on Feb. 4th. Of the merits of the seventy lots listed, limited space will not permit individual mention, but in passing through the stables the most noticeable feature of the offering in which breeders will be interested, was that the majority of the females either had calves at foot or were showing well forward in calf to British Service. Mentioning one or two individuals of the various families represented, the more outstanding ones included such breeding as was noted in the following: Butterfly Belle (imp.) a two-year-old Cruickshank Butterfly by the Duthie-bred bull, Proud Emblem; Golden Blossom (imp.) a three-year-old Bruce-bred heifer of the Brawith Bud family and due in March to Proud Magnato one of the best two-year-old bulls now in Scotland. Still another two-year-old with choice breeding and choice individuality, was Boyndie Fancy 2nd, a dark roan stylish heifer, got by a Collyne-bred bull at Uppermill. There is also an outstanding two-year-old Claret-bred heifer among the imported ones which is got by Broadhooks Chief, and other two-year-olds include, a Duke of Richmond heifer by Gainford Mary, Morning; a light roan Bruce-bred May-ower and others. Coming along to the older breeding females, the good ones here, too, are almost too numerous to mention. On entering the stables the first in line was Faichfolds Butterfly (imp.) a four-year-old roan cow bred by George Murray from a Cruickshank Butterfly cow and got by the Lady Cathcart Sire, Neil of Cluny; Milleraig Lustre (imp.) by the Clipper-bred bull, Gartley Courier, is a five-year-old Duke of Richmond cow of splendid character and a most worthy representative of this famous old herd; Cherry Ripe (imp.), another one of the more noticeable ones is a big, wide, smooth cow a Marchioness and is due shortly to an imported Kilblain Beauty Sire; Golden Fancy (imp.) also one of the largest cows in the offering, is a six-year-old and has at foot a heifer calf which will probably be one of the best calves in the sale. Still another six-year-old cow that will create considerable attention in the sale ring, is Inshfield Red Beauty (imp.) She is a Kilblain Beauty, was bred by Bruce and is a granddaughter of the Duthie-bred bull, Proud Champion; Rosebud 4th (imp.) is a year younger and also a Bruce-bred product. She is of the Marchioness tribe and has raised two calves which have both been prominent show winners, and is again due at sale time. Of the younger females, there are over a score of one and two-year-old imported heifers and the two-year-olds are with very few exceptions, all due in early spring to the service of British sires. In breeding they carry much the same blood as the older cows already mentioned. These heifers without doubt will prove one of the strong features of the sale. In imported bulls there are only three listed, one being a year-old youngster got by Boquhan Nonpareil Monarch and from a Bruce-bred Rosewood dam, which brings in a strong combination of Duthie and Bruce breeding. This youngster is good at both ends and one of the best balanced bulls at the sale. The second imported bull is a thirteen-months calf got by Mary Barron and bred by Earl of Rosebury, he, too, is a thick, well-made calf and should prove an attraction to the sale. The other imported bull is a two-year-old with a strong Butterfly pedigree and was bred in the Campbell herd. In closing we might add that the Canadian bred lots will be found to be equally worthy of consideration. This being true of both the males and females. The females, all of which are young, include the Bruce-bred Rosewood heifer,

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Make your home bright and cheerful, saving one-half on oil. Government and leading University tests prove this wonderful new Aladdin nearly five times as efficient as best round wick open-flame lamps. Burns 70 hours on one gallon common kerosene (coal-oil). No odor, smoke or noise, no pumping up, easy to operate, won't explode. **WON GOLD MEDAL GUARANTEED.** Prove for yourself, without risk, by **TEN NIGHTS FREE TRIAL** that Aladdin has no equal as a white light. If not satisfied, return at our expense. \$1000 given anyone showing us an oil lamp equal in every way to this NEW MODEL ALADDIN. **GET YOURS FREE!** We want one user in each locality to whom customers can be referred. In that way you may get your own without cost. Be the first and write us quick for 10 DAY FREE TRIAL OFFER and learn how to get one FREE. **MANTLE LAMP CO., 233 Aladdin Building, Montreal or LARGEST COAL OIL MANTLE LAMP HOUSE IN THE WORLD. Winnipeg.** Make big money spare or full time. Our easy selling plan makes experience unnecessary. We start you without money. Sample sent for 10 days trial and GIVEN FREE when you become a distributor.

## Burnbrae Shorthorns

Eighty-three years without change we have been breeding Scotch Shorthorns. The foundations of many of the best herds in America were laid from our farms. I am in a position to furnish you now with the BEST in FORM and in BREEDING that can be found any place. Twenty-five young bulls, from small calves to fifteen months old. Sixty-three cows and heifers, every one of them bred right, not a plain-looking one in the lot. Every animal that I have sold in two years has been satisfactory; the most of them sold by letter. I can satisfy you with the best in what you want at a price that will give you a chance, and I will pay the freight to your station. A Grand Champion and the son of a Grand Champion at head of the herd.

Post Office, Telegraph, Telephone and Station is Stouffville, Ont.

**ROBERT MILLER :: Stouffville, Ont.**

## WANTED—A NUMBER OF REGISTERED Shorthorn Cattle

Bulls, ages 8 months to two years old; heifers one year and up. I am not particular about fancy breeding. They must show size and quality and look like a pure-bred animal. Unless you have good individuals please do not communicate. Can also do with a few good Registered Clydesdale mares, fillies and stallions, but must have size and quality. Kindly state county, railway station, and telephone exchange.

**W. J. McCALLUM :: Brampton, Ontario**

## 1854 Maple Lodge Stock Farm Shorthorn Cattle and Leceister Sheep 1919

1 red bull calf, dam and grandam R. O. P. cows, 13 months and two roan calves younger. For sale now. Lucan Crossing 1 mile east of farm. Miss Charlotte Smith, Clandeboye, R. R. 1, Ont.

## Walnut Grove Scotch Shorthorns

We are offering choice young males and females from the best Scotch families and sired by Gainford Eclipse and Trout Creek Wonder Ind. If wanting something real good, write, or come and see us. **DUNCAN BROWN & SONS, Shedden, Ont., P. M. M. C. R.**

### SHORTHORN BULLS BY KING DORA (IMP.)

We have several young bulls by the above sire and from good milking dams. Also a few females bred to this sire. A choice lot throughout, and priced right. We have one Clyde mare, Lady Kinloch (imp.) 12248, safe in foal.

**SOCKETT BROS., ROCKWOOD, ONT.**

### Cedar Dale Scotch Shorthorns

—Pleasing Cattle and Pleasing Pedigrees—Senior sire, Matchless Duke, by Gainford Matchless, the \$12,000 son of Gainford Marquis (imp.). I have a number of choice bred heifers, and must sell a few to make room. Also have a couple of Scotch-bred bulls. Prices right at all times.

**FRED. J. CURRY, Markdale, Ont.**

### Scotch Shorthorn Bulls and Females

—I have a nice offering of Scotch-bred young bulls still on hand. The pedigrees are choice, the individuality is good—and the prices are right. If you want one Shorthorn female or a carload, come to Markdale.

**THOS. MERCER, Markdale, Ont.**

## SHORTHORNS (PURE SCOTCH)

Richly-bred bulls of A1 quality, by Escana Ringleader =95963=. Cows with calves at foot by Escana Ringleader. Write your wants.

**F. W. EWING R.R. 1, Elora, Ontario**

### GLENOW SCOTCH TOPPED SHORTHORNS

We have several thick, growthy bulls about a year old and sired by Prince Sultan; our present herd sire—a Roan Lady, by Lavender Sultan. The families represented are Golden Drop, Crimson Flower, Wedding Gift, Wimple and Kilblean Beauty's. Also pricing females.

**WM. SMITH, M.P., Columbus, Ont. Brooklin, G.T.R.; Myrtle, C.P.R.; Oshawa, C.N.R.**

### Imported Scotch Shorthorns

For Sale—three imported bulls, one yearling, one two-year-old, and our three-year-old herd about year old. Would consider exchanging an imported bull for Scotch females.

**R. M. MITCHELL, R. R. No. 1, FREEMAN, ONT.**

### Spring Valley Shorthorns

—Herd headed by Sea Gem Pride =96365=. Present offering includes two real herd headers. One imported in dam, the other by Sea Gem's Pride and Telephone and telegraph by Ayr.

**KYLE BROS., R. 1, Drumbo, Ont.**

### Shorthorn Bulls and Females

—Herd headed by Rub's Marquis, a son of calves now coming are all by this sire. We are also offering a few females in calf to him. Get our prices before buying elsewhere.

**PRITCHARD BROS., - R. R. No. 1, - ELORA, ONT.**

### 6—SHORTHORN BULLS—6

Five roans. Pure Scotch. Beef type. Good milking dams. Quality with size. Sired by Lochiel (imp.). Prices reasonable.

**WM. D. DYER, Columbus, Ont. Brooklin, G.T.R. and C.N.R.; Myrtle, C.P.R.**

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cattle

and up. I am not e and quality and ood individuals with a few stallions, e county, nge.

ton, Ontario

Shorthorn 1919

Dorothy Star" t head of herd— calves younger. For sale Clandeboye, R. R. 1, Ont.

Shorthorns

illies and sired by Gainford, write, or come and see us.

RA (IMP.)

ma. Also a few females bred Clyde mare, Lady Kinloch

. ROCKWOOD, ONT.

Pleasing Pedigree—Senior

rd Marquis (imp.). Junior rd Marquis (imp.). I have a have a couple of Scotch-bred URRY, Markdale, Ont.

ave a nice offering of Scotch females and one or two is good—and the prices are

CKER, Markdale, Ont.

SCOTCH

83—. Cows with wants.

R.R. 1, Elora, Ontario

SHORTHORNS

ce Sultan; our present herd ented are Golden Drop. Also pricing females.

C.P.R.; Oshawa, C.N.R.

imported bulls, one yearling, and our three-year-old herd three well bred bull calves females.

FREEMAN, ONT.

em Pride =96365—. Present eal herd headers. One im- er by Sea Gem's Pride and for particulars.

R. 1, Drumbo, Ont.

by Rub- Marquis, a son of nford Marquis (imp.). Our les in calf to him. Get our

ELORA, ONT.

6

with size. Sired by Lochiel and C.N.R.; Myrtle, C.P.R.

MR. CANADIAN SHORTHORN BREEDER:

Are you arranging your plans to fit in with the date of the most important auction ever held in the Dominion ?

The Dryden-Miller Sale

EXHIBITION GROUNDS

Toronto, Ontario, Wednesday, February 4th, 1920

(The day following the Annual Meeting of the Dominion Shorthorn Breeders' Association)

Following is the announcement made by Messrs. Dryden and Miller on the first page of their catalogue just issued—the quotation refers to each of the seventy lots listed between the two covers:

"We feel justified in directing your attention to the pedigrees enclosed in this catalogue. They represent the blood of some of the best herds in Scotland, as well as a few bred in Canada. Nearly all are imported, and while not in high condition, they are in good working form, good enough to show that they are the right stamp, just right to take home and put into your breeding stock. As most Shorthorn breeders on this continent are aware, it is impossible to select any cattle in Scotland at the present time that are in good sale condition. Circumstances due to the war have made foodstuffs very dear, and only certain classes of feed were permitted for use with stock. However, we feel certain that you will find the individuals as good or perhaps better than any imported cattle brought to this country for many years. They were selected in Scotland by W. A. Dryden, and the one object kept in mind was that while this country needs more cattle, there should be imported only those that are likely to work improvement on the pure-bred and commercial stocks of the country.

Many of the females have calves at foot or are very forward with calf to Scottish service, and from a breeders' point of view, should prove very favorable acquisitions to the best herds in the land. Although not many are in forward condition, a large percentage of the females should easily win back their import fee if shown at any of the larger shows.

"There are only seven bulls, but these are good. Amongst them will be seen a few that are more promising than any young bulls sold at auction for a long time.

"We extend a very cordial invitation to the breeders of the United States and Canada to be with us on February 4th, at the Exhibition Grounds, Toronto, Ont. Accommodation is provided in heated building, and no matter what the weather may be your personal comfort is assured.

"Whether you wish to buy or not, come and see some good cattle."

YOU CANNOT AFFORD TO MISS THIS GREAT SALE, TORONTO, FEBRUARY 4th

For Catalogues address: W. A. DRYDEN, Brooklin, Ont.

W. A. DRYDEN, Brooklin } Owners JOHN MILLER, Ashburn }

Auctioneers: CAREY M. JONES "SCOTTIE" MILNE CAPT. T. E. ROBSON

Rosewood 41st, got by a son of the famous Right Sort (imp.) and the Junior Champion heifer, at Toronto last fall. Of the Canadian-bred bulls the choice without doubt falls upon the year-old Augusta calf, Augusta Emblem. This calf is not only a flash-colored roan but he has just a little more of the correct Shorthorn character than will be found in most calves of the year. Combined with this he carried a great depth of smooth, even, fleshing and he will without doubt raise, rather than lower, the average on sale day. The remaining Canadian-bred bulls, are each above the average, nearly all being bred in the herds of Messrs. Dryden and Miller. They, with the imported selections, help to make seventy reasons why you should be at the Exhibition grounds on Feb. 4th.

Questions and Answers. Miscellaneous.

Moldy Silage.

There are streaks of musty silage running through the corn in my silo. They are in patches all through it. The corn was fairly ripe and the silo was filled before the frost came. Is it possible that the corn was too ripe, or was the silo filled too early? What is a satisfactory method of covering the silage after the silo is filled so as to prevent waste? C. S. W.

Ans.—The reason for the silage molding is that it was too dry when ensiled. This trouble would not have occurred had there been more moisture in the corn, or had you run a stream of water into the cutting-box. When corn is nearly matured, it is generally advisable to moisten the corn at the time of filling. A small stream of water can be run into the blower pipe right at the cutting-box. The corn should be kept tramped thoroughly for several days after the silo is filled. If oats are sown quite thickly they will practically seal the top and prevent a good deal of waste.

BRAEBURN SCOTCH SHORTHORNS 100 Breeding Females

150 Head Herd headed by Nero of Cluny (imp.) I have at present twelve young bulls that are now nearing serviceable age. The majority are sired by my present imported herd sire, and we guarantee them as good individually as the get of any other one sire in Canada. They are nearly all roans, and are priced to sell. Can also spare some breeding cows in calf to Nero of Cluny (imp.). CHARLES MCINTYRE, Scotland, Ontario Brantford 7 miles. Oakland 1 mile. L. E. N. Electric R.R. Cars every hour.

A NEW IMPORTATION OF FORTY SCOTCH SHORTHORNS

arrived home Dec. 17th. From our herd of 125 head we can offer a large selection in choice bred bulls and females. Anyone in need of foundation stock may find it to their advantage to look over our offering before making any purchases. J. A. & H. M. PETTIT Freeman, Ontario Burlington Jct., G.T.R., only half mile from farm.

ELMGROVE SHORTHORNS, YORKSHIRES

Owing to pressure of other business I will not hold my annual sale of Shorthorns this fall but am offering privately a limited number of young cows, several with calves at foot, and also a few choice-bred heifers near calving. The most select offering I ever had on the farm and all showing in good condition.

In Yorkshires I have several bred sows; a few boars of serviceable age and some young litters. JAS. R. FALLIS, Elmgrove Farm, BRAMPTON, ONT.

SHORTHORN FEMALES—SHORTHORN BULLS

We are now offering a number of choice heifers, good families and good individuals. Many are well forward in calf to our Roan Lady-bred sire, Meadow Lawn Laird. We also have bulls ready for service. Prices right. Satisfaction guaranteed. J. K. CAMPBELL & SONS, Palmerston, Ont.

SHORTHORNS SHROPSHIRE COTSWOLDS

Cows in calf and calf by side. Also heifers in calf and others ready to breed. Bulls of serviceable age JOHN MILLER Blairgowrie Stock Farm (Myrtle Stations, C.P.R., G.T.R.) ASHBURN, ONTARIO

SCOTCH BRED SHORTHORN FEMALES

I have a number of nicely-bred Scotch heifers (reds and roans), in nice condition, and a number are safely bred. These are priced to sell. I also have a couple of ten-month bulls, thick, snappy youngsters—just the herd sire sort. Inquiry invited. George Ferguson, Elora, Ontario.

Dual-Purpose Shorthorns—Herd headed by Dominator 100224, whose two nearest dams average 12,112 pounds of milk in a year. Inspection of herd solicited. WELDWOOD FARM, Farmer's Advocate, London, Ont.

MAPLE HALL SHORTHORNS We have on hand at present, four young bulls ready for service (two reds, two roans), that are just the herd sire sort; they are all got by that great sire Flower King No. 90447, and from our Good Crimson Flower and Butterfly dams. Stations: Claremont, C.P.R., Greenburn C.N.R., Pickering G.T.R.

D. BIRRELL & SON, CLAREMONT, ONT.

NEWCASTLE HERD OF SHORTHORNS AND TAMWORTHS

For sale, several young bulls ready for service, several heifers bred to Primrose Duke =10754—and several young things of nice quality and breeding. Two young cows with heifer calves at foot, all of a good milking strain. A choice lot of Tamworths of both sex, and various ages, from noted prize winning stock. Pair of registered Clydesdale Fillies rising 3. A. A. COLWILL, Long distance Phone R. R. No. 2, Newcastle, Ont.

Questions and Answers. Miscellaneous.

Miscellaneous.

- 1. Is there any home-made treatment for lice on cattle?
2. What are the rules for foot-ball?
3. I have 20 bags of potatoes. Would you advise selling them now or holding until spring?
4. What breed of horses is best for general farm work?
5. Are pupils compelled to sweep the school after four o'clock? S. R. P.

1. A mixture of one part hellebore to four parts cement has been used effectively. Some have used equal parts hellebore and sulphur. Then, again, some prefer to wash the cattle with a disinfectant material. A gallon of good soapsuds to which has been added a half teacupful of coal oil and a few table-spoonfuls of some commercial dip or disinfectant may be thoroughly rubbed or brushed into the hair. The animals should then be blanketed. This method requires considerable more time than the others mentioned, but it leaves the hair in a silky condition.

2. The rules may be secured in booklet form from any of the firms handling sporting goods; for instance, the Harold Wilson Co., of Toronto. These booklets can very often be secured from any of the large stationers.

3. The price is very good at the present time, but we see no reason why it should be any lower in the spring; in fact, the tendency is for it to be higher.

4. It depends a good deal on the nature of the soil and the kind of work. On light soil some prefer the lighter breeds, but as a rule the heavier breeds as Clydesdale or Percheron, are preferred. Other heavy breeds are Shires and Belgians.

5. It is customary for the section to engage a caretaker for the school whose duty it is to do the sweeping and dusting. Unless the ratepayers have decided at their annual meeting that the pupils are to take care of the school, rather than engage a caretaker, it would possibly not be the pupils' duty to do this work after four.

**100 HEAD**

**Registered Stock**

**GLENWOOD STOCK FARM**

**100 HEAD**

**CLEARING SALE**

Of 40 Holsteins, 4 Clydes, 33 Shropshires, 23 Poland Chinas and all Farm Implements.

**Wednesday, February 18th, 1920**

10 a.m. sharp. Stock Sale 1.15 p.m.

Sen. sire, Baron Colantha Fayne, a worthy son of Queen Butter Baroness, 33.18 lbs. butter in 7 days; milk test 4.9%. 15 of his daughters in sale.

The two-year-olds are bred to jr. sire, a grandson of Maud Snowball with record of 634 lbs. milk and 29.12 lbs. butter in 7 days.

Only 2 cows over 5 years old and bred to freshen February and March, and are in fine shape for testing.

Sale includes a daughter and grand-daughter of Princess Cornucopia Sadie, 24.52 lbs. at 3 years and others of like quality of King Segis Ormsby and Butter Boy Breeding.

The Clydes are from imported stock, Shropshires and Poland Chinas are of show quality.

Farm 3 miles from Putnam C.P.R., 7 miles from Ingersoll.

Concessances provided. Sale under cover. Write for catalogues.

**I. N. HOWE, Proprietor**      **L. H. LIPSIT, Manager**

**MOORE & BRADY, Auctioneers**

**MERCROFT FARM - HOLSTEINS**

Farms at Dorval Station, Que., and Burlington, Vt.

Our imported herd sire, RAG APPLE PIETERTJE PONTIAC -36248- (239942) is undoubtedly one of the best individual sires in Canada to-day, and his calves, now coming, show his prepotency. In breeding—his ancestors include Rag Apple Korndyke 8th, Pontiac Korndyke, King Segis, King of the Pontiacs and Colantha Johanna Lad. As he differs in breeding from most high-record Canadian sires of to-day, a fusion of this blood should be advantageous in most herds. Our foundation herd being small, we have decided to accept a few approved cows for service to Rag Apple Pietertje Pontiac at \$100 each. Will also consider selling a half interest to some good breeder in Eastern Ontario or Quebec. At present we have a few young sons of this sire for sale. Our milking females average over 13,000 lbs. of milk per year on twice-a-day milking. They are never crowded, and therefore are healthy, normal-cows, with healthy, normal calves. Herd tuberculosis tested twice yearly.

**R. J. MERCUR, Mercroft Farms, P.O. Box 1568, Montreal, Que.**

**Annual Meetings of the Live Stock Association.**

Monday, Feb. 2, 2.00 p.m., Canadian Thoroughbred Horse Society, Directors' Meeting; 2.00 p.m., Canadian Swine Breeders' Association, Directors' Meeting; 3.00 p.m., Canadian Thoroughbred Horse Society, Annual Meeting; 3.00 p.m., Dual-purpose Shorthorn Club, Annual Meeting; 3.00 p.m., Ontario Berkshire Club, Annual Meeting; 4.00 p.m., Ontario Yorkshire Club, Annual Meeting; 4.00 p.m., Canadian Pony Society, Directors' Meeting; 8.00 p.m., Canadian Jersey Cattle Club, Directors' Meeting; 8.00 p.m., Dominion Shorthorn Breeders' Association, Directors' Meeting; 8.00 p.m., Canadian Swine Breeders' Association, Annual Meeting; 8.00 p.m., Canadian Pony Society, Annual Meeting.

Tuesday, Feb. 3, 9.00 a.m., Ontario Swine Breeders' Association, Directors' Meeting; 9.30 a.m., Canadian Trotting Association, Directors' Meeting; 10.00 a.m., Ontario Swine Breeders' Association, Annual Meeting; 10.00 a.m., Dominion Shorthorn Breeders' Association, Annual Meeting, Prince George Hotel; 11.00 a.m., Canadian Jersey Cattle Club, Annual Meeting; 11.00 a.m., Canadian Standard-bred Horse Society, Directors' Meeting; 2.00 p.m., Canadian Trotting Association, Annual Meeting; 4.00 p.m., Canadian Sheep Breeders' Association, Directors' Meeting; 8.00 p.m., Canadian Sheep Breeders' Association, Annual Meeting; 8.00 p.m., Canadian Standard-bred Horse Society, Annual Meeting.

Wednesday, Feb. 4, 9.00 a.m., Ontario Sheep Breeders' Association, Directors' Meeting; 10.00 a.m., Ontario Sheep Breeders' Association, Annual Meeting; 10.00 a.m., Canadian Ayrshire Breeders' Association, Directors' Meeting; 2.00 p.m., Canadian Kennel Club, Directors' Meeting; 2.00 p.m., Clydesdale Horse Association of Canada, Directors' Meeting; 4.00 p.m., Canadian Hackney Horse Society, Directors' Meeting; 4.00 p.m., Canadian Aberdeen-Angus Association, Directors' Meeting; Evening, Ayrshire Banquet; 8.00 p.m., Canadian Aberdeen-Angus Association, Annual Meeting; 8.00 p.m., Canadian Hackney Horse Society, Annual Meeting; 8.00 p.m., Canadian Kennel Club, Annual Meeting; 8.00 p.m., Ontario Horse Breeders' Association, Directors' Meeting; 8.30 p.m., Ontario Horse Breeders' Association, Annual Meeting.

Thursday, Feb. 5, 8.30 a.m., Ontario

**For Sale—One Yearling Holstein Bull**

Born Sept. 8th, 1918, sired by Hillcrest Ormsby Count. Dam, Rauwerd; butter in seven days, 28.00 lbs.; milked 29,000 lbs. in 1 year; also 90 lbs. for 100 days. His three sisters sold for \$10,300 at the Toronto, 1918. His dam milked in 11 months and 5 days, 15,428 lbs. and freshened in 13 months.

For price and description, write—

**R. R. No. 2, W. J. CALDWELL**  
Spencerville

**PIONEER FARM HOLSTEINS**

My present sales' list includes only bull calves born after Jan. 1st, 1919. These are priced right.

**WALBURN RIVERS & SONS**  
R.R. No. 2, Ingersoll, Ontario

**Evergreen Stock Farm Registered Holsteins**

Our Motto: Choice individuals—the profitable producing kind. Nothing for sale now, but get in line early for your next herd sire.

**A. E. HULET,**      **NORWICH, ONTARIO**  
Oxford Co., G.T.R.

**CHOICE HOLSTEIN FEMALES!!**

I could spare ten or twelve two and three-year heifers, daughters of Baron Colantha Fayne and Louis Prilly Rouble Hartog. All are bred to freshen early to our 34-lb. sire. Also have a few young bulls, one from a 29.95-lb. cow that has milked 105 lbs. per day. Don't delay, this offering is priced right.

**T. W. McQUEEN, Tillsonburg Ont.**

**Summer Hill Holsteins**

—We have the best bunch of Holstein bulls ever offered at our farm. Their dams have records up to over 34 lbs. of butter in 7 days. All are sired by a bull with a 34-lb. dam. One is a full brother to the Grand Champion bull at Toronto this year. Prices reasonable.

**D. C. FLATT & SON, R.R. No. 2, Hamilton, Ont.**

**Bulls advertised in Christmas Number are both sold**

We are offering a bull calf sired by Hill Crest Rauwerd Vale, out of a 23-lb. jr. 4-year-old dam. Price \$300. Bull calf by same sire, out of a two-year-old heifer. Price \$100.

**W. FRED FALLIS,**      **R. R. 3,**      **MILLBROOK, ONT.**

**SUNNYBROOK FARM HOLSTEINS**

We are offering for quick sale one 24-lb. bull and one 26-lb. bull ready for service. Both are sired by a 33-lb. son of the great King Segis.

**JOSEPH KILGOUR,**      **NORTH TORONTO, ONT.**

**A 31-lb. SON OF FINDERN KING MAY FAYNE**

This is the sire of three bull calves we are now offering. These are choice youngsters, nicely colored and of good record dams. Dams all have R.O.P. records as well as 7 day tests.

Prices right. Satisfaction guaranteed.

**PETER B. FICK,**      **PORT ROWAN, ONT.**

**HOLSTEIN BULLS FROM 30-lb. DAMS**

If you want 30-lb. bulls—good individuals—and priced right—you should see my present offering. I also have lower priced bulls and am offering females bred to Ormsby Jane Burke. Correspondence solicited.

**R. M. HOLTBY, Manchester G.T.R.; Myrtle C.P.R.; PORT PERRY, Ont.**

**CLOVERLEA HOLSTEIN FRIESIANS**

We are offering this week two choice bulls, one ready for service, from a 25-lb. dam. Priced right for a quick sale. For price and particulars, apply to

**GRIESBACH BROS.,**      **R. R. No. 1,**      **COLLINGWOOD, ONT.**

**Cedar Dale Farm**

—The Home of Lakeview Johanna Lestrangle, the \$15,000 sire—chief sire in service. He is the son of the 38.06-lb. cow, Lakeview Lestrangle, and is out by him at right prices. We are offering a few females bred to him and also have a few bull calves sired by him at right prices. Other older bulls, sired by our former herd sire, Prince Segis Walker, son of King Segis Walker. A. J. TAMBLYN, Cedar Dale Holsteins (C. N. R. station one mile)

**Auctioneers' School of Experience**

2112 Farnum St., Davenport, Ia.—Teaches all branches. You learn at home. Students now selling in 17 States. Write to-day.

**Hospital for Insane, Hamilton**

Holsteins, yes! All bulls of serviceable age are sold, but several of six months and younger, from one of the best sons of King Segis Alcartra Spofford, and our best dams will be sold at reasonable prices.

**APPLY TO SUPERINTENDENT**

**Raymondale Holstein-Friesians**

A herd sire of our breeding will improve your herd. We have sons of our present sire, Pontiac Korndyke of Het Loo (sire of \$12,760 Het Loo Pieterje), and also sons of our former sire, Avondale Pontiac Echo. Several of these are of serviceable age, and all are from good record dams. Quality considered, our prices are lower than anywhere else on the continent. Their youngsters should not remain long. Write to-day.

**RAYMONDALE FARM**      **D. RAYMOND, Owner**  
Vaudreuil, Que.      Queen's Hotel, Montreal

**MONTROSE HOLSTEIN - FRIESIAN FARMS**

(The Home of 20,000-lb. Cows)

Present offering (at right prices), four young bulls out of R.O.P. cows with records of 20,000 lbs. milk and over. See this herd and our young bulls in particular before buying elsewhere. Visitors always welcome.

**R. J. GRAHAM, - Montrose House Farms, - BELLVILLE, ONTARIO**

**Hamilton House Holstein Herd Sires**

Our highest record bull for sale at present is a 4 months calf from Lulu Darkness 30.53 lbs. and sired by a son of Lulu Keyes 36.56 lbs. His two nearest dams therefore average 33.44 lbs. and both have over 100 lbs. of milk per day. We have several older bulls by the same sire and from two and three-year-old heifers with records up to 27.24 lbs. All are priced to sell.

**D. B. TRACY,**      **Hamilton House, COBOURG, ONT.**

**HOLSTEIN HERD AVERAGES 18,812 LBS. MILK**

A herd of 13 pure-bred Holsteins last year averaged 18,812 lbs. milk and 638.57 lbs. fat. Do you realize the money there is in such cows? It is estimated that the average annual yield of all cows in this country is under 4,000 lbs. These 13 cows produce as much milk as 62 cows of the 4,000-lb. class.

Why feed, milk and shelter any more cows than you need to produce the milk you require? If interested in **HOLSTEIN CATTLE** send for booklets—they contain much valuable information.

**HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA**  
W. A. CLEMONS, Secretary,      ST. GEORGE, ONT.

**"PREMIER" HOLSTEIN BULLS—Ready For Service.**

I have several young bulls from dams with 7-day records up to 32.66 lbs. of butter, 755.9 lbs. of milk, with 110 lbs. of milk in one day—over 3,000 lbs. in 30 days. All are sired by present herd sire which is a brother to May Echo Sylvia. Step lively if you want these calves.

**H. H. BAILEY,**      **Oak Park Farm, PARIS, ONT.**

**DR. BARNARDO'S HOMES**

A party of boys and girls under the auspices of the above Homes will arrive in Ontario middle of March, 1920. Applications for service, as well as boarded-out children, may be sent for boys to

**Mr. John W. Hobday, Manager, 50-52 Peter Street, Toronto, and for girls to Miss Taylor, Secretary, Girls' Home, "Hazelbrae," Peterborough.**

Cattle Breeders' Association, Directors' Meeting; 9.00 a.m., Ontario Cattle Breeders' Association, Annual Meeting; 10.00 a.m., Ontario Ranchers' Meeting; 9.00 a.m., Canadian Shire Horse Association, Directors' Meeting; 10.00 a.m., Holstein-Friesian Association, Annual Meeting; 10.00 a.m., Canadian Shire Horse Association, Annual Meeting; 10.00 a.m., Canadian Ayrshire Breeders' Association, Annual Meeting; 10.30 a.m., Clydesdale Horse Association of Canada, Annual Meeting; 2.00 p.m., Canadian Hereford Breeders' Association, Directors' Meeting; 3.00 p.m., Canadian Hereford Breeders' Association, Annual Meeting.

Friday, Feb. 6, 10.00 a.m., Eastern Canada Live-Stock Union, Annual Meeting. With one or two exceptions the meetings will be held at the Carls-Rite Hotel, Toronto.

QUEBEC MEETINGS.

Tuesday, Feb. 3, 2.00 p.m., French Canadian Cattle Breeders' Association; 4.00 p.m., French Canadian Horse Breeders' Association; 7.00 p.m., Quebec Sheep Breeders' Association; 9.00 p.m., Quebec Swine Breeders' Association.

Wednesday, Feb. 4, 10.00 a.m., General Stock Breeders' Association.

The Quebec meetings will be held in the City Hall, in the City of Quebec.

**Gossip.**

**The Holstein Herd at Mercroft.**

In the advertising columns elsewhere in this issue will be found an advertisement of Mercroft Holsteins. Readers of our Christmas issue will also recall the photos of the two noted Mercroft herd sires, featured in a special advertisement in that issue, and as most subscribers retain their Christmas issues for some time it is almost useless to dwell for any length on the breeding of these great sires. Mr. Mercur, with farms at Dorval, Que., and Burlington, Vt., may well feel proud of the splendid beginning he has made in the way of foundation animals, and, as seen at the farm recently by a representative of this paper, the young stock he is now getting is the sort that will appeal to all lovers of the breed. A resume of the milk sheets was also pleasing and showed up an average of something over 13,000 lbs. of milk per year for the entire herd.

**PATENT SOLICITORS**

& Co. The old-established Featherstonhaugh & Co. The old-established firm. Patent everywhere. Head Office: Royal Bank Buildings, Toronto. Ottawa Office: 5 Eglon Street. Offices throughout Canada. Booklet free.



### FEEDS FEEDS

We can quote inducing prices on all kinds of feed including Linseed Oilcake Meal, Cottonseed Meal, Gluten Feed, Distillers Grains, Oats, American Corn, Mill Feeds, Feeding Molasses, &c. (Carlots or less).

We buy: Hay, Straw, Potatoes, Oats, Buck wheat, Barley, Peas, Beans, &c. *Write us to-day*

**Allen - Kelley Company**  
214 Board of Trade Bldg., Toronto

### Cream Wanted

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

**Ontario Creameries Limited**  
LONDON - ONTARIO

**Two Good Jersey Bulls for Sale**  
Ready for service; one (Imp.) son Combination Premier; dam, daughter of Golden Fern's Noble.  
**IRA NICHOLS, Burgessville, Ontario**

**CITY VIEW AYRSHIRES**  
Three bulls ready for service. One two-year-old heifer, bred. Bull calves, all have several direct crosses of R.O.P. blood.  
**James Bagg & Son, St. Thomas, Ont.**

### Maple Shade Farm

Imported Shropshire ewes served by best imported rams, very desirable for foundation flocks.

**W. A. DRYDEN**  
Brooklin - Ontario

### Shropshires

25 Shearling Ewes, all bred to Knoch ram. Also a fine bunch of ewe lambs. Prices right. Satisfaction guaranteed.

**W. D. BURTON**  
R.R. No. 2 - Brantford, Ont.

**Shropshire Yearling Ewes** bred to Bibby's 84 (Imp.) ram and ewe lambs sired by him. Two Shorthorn bulls. Two Clydesdale stallions.  
**W. H. PUGH, Myrtle Station, Ont.**

**Berkshires**—Boars ready for service and boar pigs, rich in the blood of Lord Premier's Successor 161500, Grand Champion, 1914, Champion sire of 1915, 1916, 1917. His descendants have won Grand Champion honors at the largest and strongest shows of 1919. The Champion Berkshire barrows of 1918 International were double grandsons of Lord Premier's Successor. We have shipped many Berkshires to Canada with satisfaction to customers. Prices on request.  
**HOOD FARM, INC., Lowell, Mass.**

### YORKSHIRES

We are now booking orders for Fall pigs, both sexes, 6 weeks to 3 months old. Several large litters to choose from.

**WELLDWOOD FARM**  
Farmer's Advocate, London, Ontario

**Big Type Chester Whites**—We cleaned up at London and Toronto Exhibitions, 1919. Now offering pigs from our 896-lb. sows, and sows bred to our 1,005-lb. boar.  
**JOHN ANNESSER, Tilbury, Ont.**

**Meadow Brook Yorkshires**—We have a choice offering of sows bred and boars fit for service. Also a number of large litters ready to wean. All show the best of breeding and excellent type.  
**G. W. MINERS, R.R. No. 3, Exeter, Ont.**

**HIGH-CLASS DUROC JERSEYS**  
Herd headed by Brookwater Ontario Principal 9785 (Imp.) Champion male Toronto and London 1918. 25 high-class young boars 4 to 6 months old. Select your herd header here.  
**Culbert Malott, R. R. 3, Wheatley, Ont.**  
Bell Phone

**TAMWORTHS**  
Young Boars and sows bred for fall farrow. Express charges prepaid. Registered stock. Write **JOHN W. TODD, CORINTH, ONTARIO**

### Questions and Answers.

**Miscellaneous.**

**Sale for Taxes.**  
Where a farm is sold at a tax sale, who can claim the hay for the year allowed for redemption, the farm being unoccupied?  
N. O.

Ans.—The purchaser.

**Sharing the Game.**  
A hires B to help him cut wood in the bush. They fell a tree and find a number of coons. Has B a right to a part of the game? If so, how much?  
R. M.

Ans.—Legally, B has no claim to the game. Of course, it would be a nice thing on A's part to share the game with his partner.

**Trees as Boundary—Line Fence.**  
What is the law in regard to trees growing along a line fence? My neighbor has a board line fence that has been built for at least 15 years, and he has boards nailed to the tress leaving trees on my side of line. Am I at liberty to cut whatever trees are on my side of fence? These trees are large elm, and they shade my lot for a distance of 60 feet. What about a jog in line fence? Is it legal to have jogs in line?  
J. M.C.

Ontario.  
Ans.—We consider you entitled to cut down the trees in question. But as to the jog in the fence, it is a matter for rectification by agreement between you and your neighbor, the adjoining owner, and hardly otherwise at this late date.

### Municipal Office.

1. I have been school trustee of our section for a number of years and was appointed secretary of same. I wish to retire. I tendered my resignation on last meeting night Dec. 2, which was duly accepted. On the 3rd I notified clerk of town, also sent him a copy of motion as I wish to try the council. Said clerk says I did not resign in time. Is this correct?

2. I am also a user of hydro power, controlled by the town, and as their is likely to be a chance of my becoming chairman of hydro commission here, he says as I am under contract I cannot act as such. We use power in our mill. I am not aware of any contract being signed. The clerk and myself are not on the best of terms so I would be thankful to you if you can make me clear on this matter.  
H. C. M.

Ontario.  
Ans.—1 and 2. The Clerk's contention is not correct in either instance.

### A Bad Borrower.

A used to work for B before he (A) went overseas. A was overseas for 2 1/2 years, and when he came back went to visit with B. They were the best of friends. B was short of money and asked A to lend him \$130 to buy feed for his cattle and gave A his word that he would pay him back in a month. A left before a month had gone by and went to work at another place. About four months later A became short of money and wrote to B asking him to give him back his money. B promised to pay A in a week. After another month had gone by A again wrote B and was told that he could not pay him. A therefore sent B a note for three months' at 7 per cent., and asked B to sign it. This B refused to do and asked A to wait for a few months longer. A said he would go and see a lawyer if B did not sign the note. All the evidence A has that he lent B any money is the letters that have passed between them. In one letter B admits that he owes A \$130. After a while B sends A a note for eight months at 5 per cent., and which is not bankable, and which A does not want to accept.

1. Would the letters be accepted as evidence that B owes A the money?
2. Can A send B another note and have him arrested if he refuses to sign it?
3. What charge could be laid against B?
4. Would A have a chance of winning an action if he sued B?

Ans.—1. Yes, along with A's testimony.  
2. No.  
3. None.  
4. Yes.

## THE CONSUMPTION OF Sydney Basic Slag INCREASES ALL THE TIME

The mills are working day and night, and the production for week ending 10th January was 940 tons, every ton of which has already gone into the hands of farmers for consumption this Spring. Sydney Basic Slag was first introduced into Ontario in 1913, and the sales that year were 230 tons. The sales in 1919 were close on 7,000 tons, and in 1920 will probably be 10,000 tons. In face of these facts, isn't it worth while making a trial of Sydney Basic Slag on your grain crop this season? If we have no agent in your district, we will supply you with a ton direct from the factory for \$23, cash with order. Even if you are using other fertilizers with good results, it will pay you to try Sydney Basic Slag. Now, we know you have been reading our advertisements and saying to yourself, "some day I'll give that stuff a trial." Well, don't delay longer, just sit down right now and get into communication with our General Sales Agent.

**The Cross Fertilizer Co., Limited**  
SYDNEY, NOVA SCOTIA  
Address all communications to  
**A. L. SMITH, 220 Alfred St., Kingston, Ont.**

### PROSPECT FARM JERSEYS

The prices of all dairy products are very high, and Jersey milk, and milk products are the highest quality. Where can you find a better investment, or one that will give you more satisfaction than to buy one or more good fresh Jersey cows?  
We have for sale: pure-bred cows and high grades, fresh, or to freshen soon, or cows due to calve later. These are fine cows, good producers, quiet and easily milked, and in splendid condition. Also young bulls under nine months old, from R.O.P. dams that will be priced very reasonably. Buy bulls young so that they can be shipped by express.  
**R. & A. H. BAIRD, R. R. 1, NEW HAMBURG, ONT.**

### BRAMPTON JERSEYS

The Largest Jersey Herd in the British Empire  
At Toronto Exhibition, 1919, we won twenty-five of twenty-seven first prizes. We now have for sale first-prize young bulls from R. O. P. dams, as well as females of all ages.  
**B. H. BULL & SONS - Brampton, Ontario**

**Laurentian Producing Jerseys**—The oldest bull we have at present is a year old youngster sired by our herd sire, Broadview Bright Villa, No. 5630, and from Brampton Astoria, one of the best imported cows in the herd. We also have others younger of similar breeding, as well as a few bred heifers for sale. **Frederick G. Todd, Owner, 801 New Birks Bldg. Montreal, P. Q. Farm at Morin Heights, F. J. Watson, Mgr.**

**CANADA'S MOST BEAUTIFUL JERSEY HERD**  
The Woodview Farm **JERSEYS**  
Herd headed by Imported Champion Rower, winner of first prize with five of his daughters on the Island of Jersey, 1914, second in 1916, and again first in 1917. We are now offering for sale some very choice bull calves, ready for service, sired by imported bulls and from Record of Performance imported prize-winning cows. Also some cows and heifers. Prices right. We work our show cows and show our work cows.  
**JNO. PRINGLE, Prop. London, Ontario**

**Edgeley Bright Prince**—A son of Sunbeam of Edgeley, R. O. P. champion, sired by a son of Viola's Bright Prince, is for sale. He is 3 years old, sure and active. Won third prize in aged class at Toronto and London, 1919. Write for price.  
**JAMES BAGG & SONS (Woodbridge C.P.R., Concord G.T.R.) EDGELEY, ONT.**

**Homestead Farm R.O.P. Ayrshires**—At the head of our herd at present we have a grandson of the great Jean Armour. He is being used on the daughters of our former sire, Garlaugh Prince Fortune (Imp.). Young cows freshen this fall and winter.  
**MACVICAR BROS., 'phone 2253 Harrietsville, Belmont, R.R. No. 1, Ont.**

**Glenhurst Ayrshires** headed by Mansfield Mains Sir Douglas Hague No. 16163 Imp. have been noted for their depth and size, good traits and smoothness of conformation. If you are looking for a combination of size, type, and production—plus high butter fat—write me or visit the farm. Males and females of all ages for sale.  
**JAMES BENNING, Summerdown Sta., G. T. R. Williamstown, C. P. R. Bell Telephone 75-3 Cornwall**

**SPRINGBANK R.O.P. AYRSHIRES**  
Our Ayrshires win in the show ring and they fill the pail. We hold more present R.O.P. Champion records than any other herd in Canada. Young bulls and females by present herd sire Netherburn King Theodore (Imp.)  
**A. S. TURNER & SON, (Railway Station Hamilton) RYCKMAN'S CORNERS, ONT**

**Westside Ayrshires and Yorkshires**—I can spare a few females, some fresh. All have good records, or are running in R.O.P., and have two good bull calves, 10 months old, from heavy-producing dams. Have Yorkshires any age and either sex. Write me your wants, or come and see.  
**Middlesex Co. DAVID A. ASHWORTH, Danfield, Ont.**

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Choice pigs of 3 months. Pedigree, safe delivery.  
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Don't say that Puffed Grains are scientific foods.

Or that Prof. Anderson, the food expert, invented them.

Or that every food cell is exploded so that every atom easily digests.

Or that Puffed wheat means whole wheat, rich in minerals which growing children need.

Those are facts for mothers. But they rather spoil the taste of tidbits for a child.

### Call Them Bubble Grains

Call them bubble grains. Tell how steam explosion puffs them to eight times normal size.

Make them joy foods. Children revel in their flimsy texture and their nut-like taste.

Make every thought inviting. For these are the greatest foods created from wheat or rice.

They are the best-cooked grain foods in existence. Digestion is easy and complete.

They mean ideal foods for any hour, for they never tax the stomach. And one—Puffed Wheat—makes whole wheat tempting. That is what you want. It is rich in elements which white flour lacks, and few children get enough.



Serve with cream and sugar, or mixed with fruit, or doused with melted butter.

For suppers or between meals float in bowls of milk.

Use as wafers in your soups. After school let children eat like peanuts, crisped and buttered.



### Puffed Wheat

### Puffed Rice

Both Bubble Grains

Puffed to 8 times normal size

## The Quaker Oats Company

Peterborough, Canada

Sole Makers

Saskatoon, Canada

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## Our School Department.

### Plots in Collegiate Institutes, High and Continuation Schools.

BY J. B. DANDENO.

Before a beginning was made in the teaching of agriculture in the secondary schools of Ontario in 1914, it was thought that, excepting in rare cases, a plot of ground could not be successfully managed in connection with the class work of the school. Moreover, as the subject is optional, the introduction of classes, either with or without plots, has been rather backward for several reasons, chief among these being: 1, a lack of qualified teachers; 2, a bonus subject only, and 3, crowded curriculum. The accompanying table shows the development since 1914:

The number of High Schools qualifying for grants since 1914 are here given:

	No. schools	With plots	No. without plots
1915			
January-June.....	11		11
Sept.-Dec.....	15		15
1916			
January-June.....	15	1	14
Sept.-Dec.....	20	1	19
1917			
January-June.....	20	7	13
Sept.-Dec.....	21	7	14
1918			
January-June.....	21	16	5
Sept.-Dec.....	26	18	8
1919			
January-June.....	24	17	7
Sept.-Dec.....	30	23	7

earnest attempt has been made to adapt the organization of the school to meet this condition by placing agriculture on the last period of the day, or by combining two regular periods for this subject.

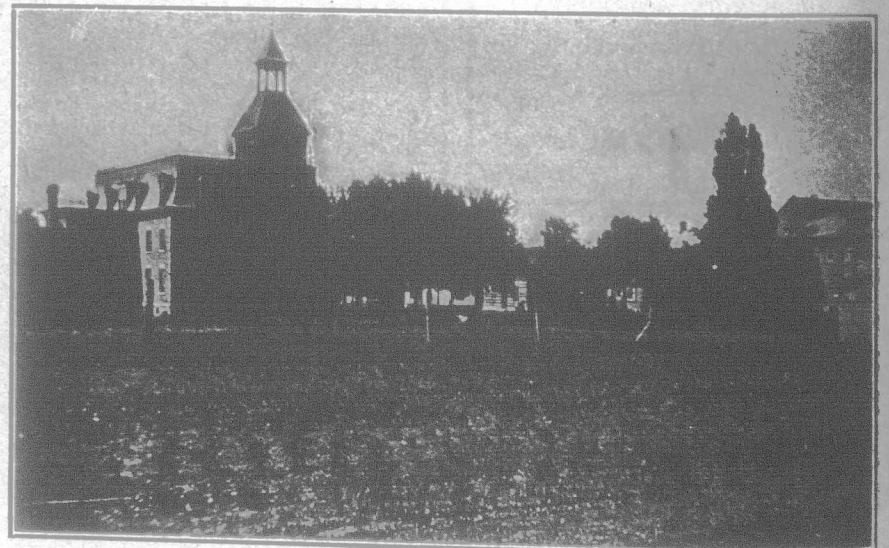
School plots should be planned in such a way as to link up, as far as possible, with the farming industry of the neighborhood. In a corn-growing community, corn should be emphasized; in a fruit-growing community, fruit growing should be stressed, and so on; but general horticulture should always have a prominent place, as it is applicable to any community.

In these days, many young people, especially girls, grow up without much experience in, or knowledge of, the practice of gardening, consequently some training in horticulture in the high school course should prove very useful later in life, not only in broadening the viewpoint of the individual, but also in providing useful information.

The accompanying illustration shows what might be done in many cases under even adverse circumstances, for most of the land now made use of in this plot was formerly a dumping ground over-run with weeds. The very fact that such waste land can be made to "blossom as the rose" is in itself a very important lesson. As this plot is almost beside the school building, the maximum of use can be made with a minimum of expenditure of time.

As the pupils who take the classes in agriculture are also taking the other regular subjects of the high-school course, it can easily be seen that a plot might be provided with advantages for each of the high schools of the Province, excepting, perhaps, those in our largest cities.

The aim of the Department of Education at this present time is rather to



The School Plot at Renfrew Collegiate Institute with Poultry House at the extreme right.

These figures show that an extraordinary development has taken place since 1917 in the introduction of plots. This was, no doubt, due in part to war conditions, coupled with the praiseworthy desire on the part of pupils and teachers to do something to increase production in time of need. Once having made the attempt to manage a plot, both pupils and teachers seem to realize that such work as may be required in managing a plot is in itself well worth while, to say nothing of the knowledge and mental development gained in carrying on such work in a scientific manner under the management of a trained teacher.

In most secondary schools, the school grounds are, of course, too small to permit of a portion being set aside as a school plot, consequently, in order to secure suitable land for plots, it has been found necessary in most cases to go some distance from the school, which renders it somewhat inconvenient for classes, to say nothing of the time lost in going to and from the plot. Moreover, as the ordinary high school period for a subject on the time-table extends usually from thirty to thirty-five minutes, and, as little use could be made of so short a period in such work as this, the class is thus handicapped to a certain extent. However, be it said to the credit of the principals of the schools concerned, an

incorporate agriculture into the high-school course of study, than to attempt to establish separate schools for agriculture. In this way the subject will be educational rather than vocational.

Renfrew Collegiate Institute was the first secondary school in Ontario with a poultry house as part of the equipment.

A little systematic note taking could be made a very valuable bit of work in the study of agriculture, nature study and elementary science. Keeping records of observations and conclusions is a practical thing. It has so many applications in life for the busy man, most country people have yet to learn the value of keeping records. They go too much by memory to do well in an occupation that should be highly scientific. A record once made waits without the effort of memory or the possibility of change, until it is wanted. The organizing thought of our great social world is based on records kept on sheets of white paper with black ink-marks, and not on memory. Good note-taking aids the memory, because it requires reflection and thought to organize the matter into a note which represents the expression by the pupil of the impressions he has received through the teacher's directing and instruction.

GEO. W. HOFFERD

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**Canadian National Railways**



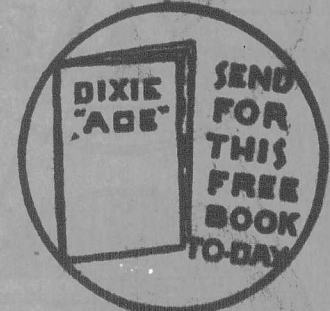
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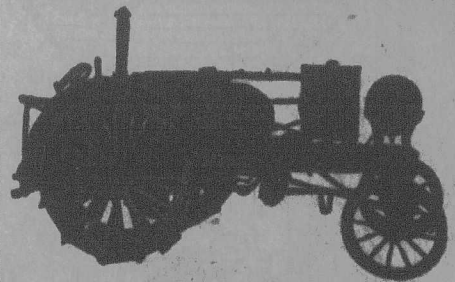
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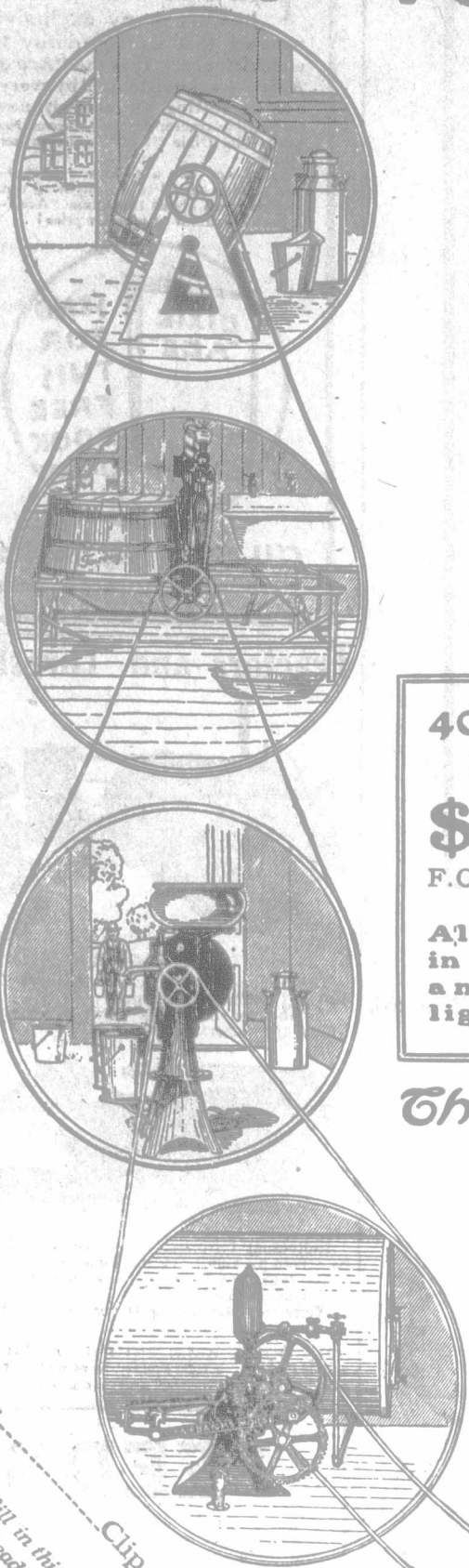
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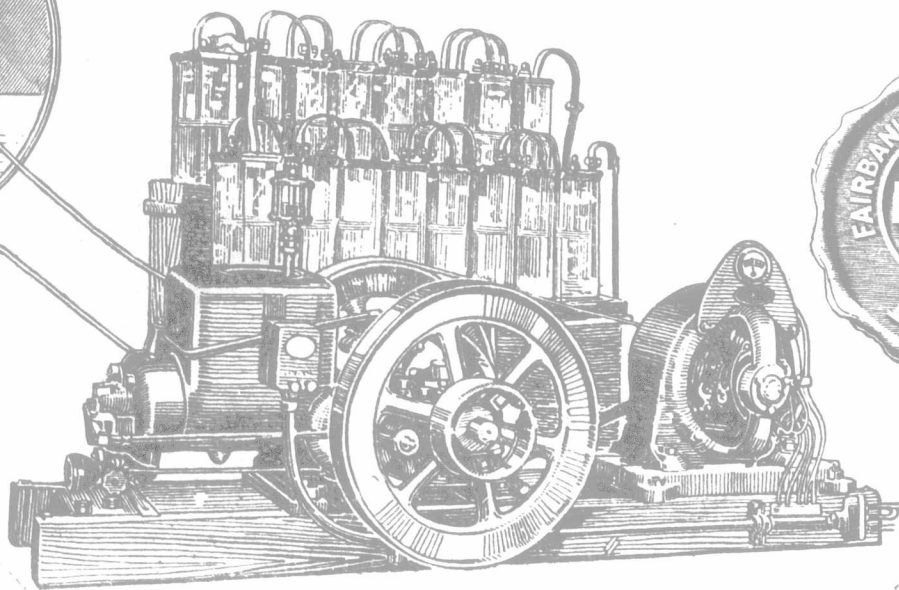
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